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\$2.00 Per Year.



V & B TOOLS



Vaughan's Vanadium Nail Hammer

The Toughest, Strongest, Hammer Made

Here is a hammer that your customers will appreciate. Vanadium steel is the best steel, being highly refined. This hammer, like all **V & B** hammers, has our **NON-SLIP CLAW** which will pull a nail, head and all through a block. **Retail price, \$2.25.**

No. 41—20 oz.; No. 41½—16 oz.; 42—13 oz.; 42½—10 oz.

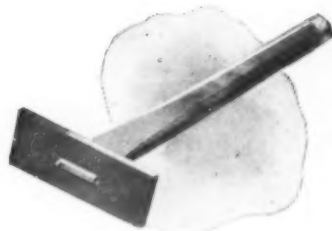
It's Easy to Sell V & B Trade Marked Tools

AL-O-ITE Cold Chisels

Individually Tempered

Individually Tested

V & B Al-o-ite Cold Chisels are made of a special high grade steel, made to stand the constant pounding and hard usage given a cold chisel. Order a display assortment **Number 400**. It contains one each ¼, 5/16, ¾, 1; two each ½, ¾; four ⅝ inch. Also furnished in straight sizes, packed in cardboard boxes.



The **V & B** guarantee of quality is behind every tool bearing our **V & B Trade Mark**. Every article we manufacture is closely inspected and severely tested before leaving our factory. **Today** is the time to take advantage of our guarantee and many years of successful manufacturing experience. Give yourself the assurance of satisfied customers by giving your customers satisfactory tools.

WRITE TODAY FOR OUR COMPLETE CATALOG
SHOWING FULL LINE OF HIGH GRADE TOOLS

VAUGHAN & BUSHNELL MFG. CO.

Makers of Fine Tools

2114 Carroll Avenue

Chicago, Illinois

MAHONING HEATERS

Sell Themselves

So many superior qualities are involved in **MAHONING** construction that to tell of one would slight others equally as important.

No need to *talk* Mahoning qualities. *Show* your customer,—he will see it at a glance.

We want good live dealers everywhere, and offer a tempting proposition.

A style and size for every purpose.



MAHONING TYPE "C"

Illustration shows quite clearly the combustion as it takes place in the Mahoning system. Note how the admission of air through the slots in the firepot causes combustion to take place all around the outside of the fire. The hottest part of the flame is in direct contact with the outside surface of the heater where the radiation of heat takes place. Only one of the features that have made the Mahoning famous from coast to coast.

The MAHONING FOUNDRY CO.
YOUNGSTOWN, OHIO

A Mammoth Plant With a Mammoth Production

FRONT RANK

TRADE NAME REGISTERED

Real "FITTING FITTINGS"



Write for Catalog

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HAYNES-LANGENBERG MFG. CO.

4058 FOREST PARK BOULEVARD
ST. LOUIS, U. S. A.

ESTABLISHED 1880

Representative of

The Hardware, Stove,
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Air Heating and Venti-
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ADVERTISING IS THE seed of orders. A farmer does not cease to plant seed because the yield is greater than the foregoing harvest. He knows

Orders and Advertising. that only a scant crop would result from dependence upon the few seeds that might fall into the ground at the time of reaping. Accordingly after the grain is garnered, he plows the soil and systematically sows fresh seed for a new supply of wheat or corn. The analogy between farming and commerce is close enough to give uncommon cogency to the illustration. Manufacturers who cease advertising because their orders are in excess of their product or who curtail their publicity on that account are overlooking the central fact of advertising. If the only function of advertising were to help market a particular output, then it would be reasonable and profitable to stop advertising when that end had been accomplished. A contractor removes the scaffolding when the building is completed. But advertising is not a scaffolding. It is part of the structure of business. It is as essential to modern merchandising as walls and roof are to a house.

Consequently, it is a wrong view of advertising to consider it merely as instrument for bringing in more orders to a factory or office. That is only part of the function of advertising. It has a greater work to do. A clumsy and somewhat strange word is used to describe that work, namely, "institutionalizing." By reason of the tremendously complex demands upon the attention of the public, a manufacturing company's name and product must constantly be kept in the focus of popular awareness in order that they may become thoroughly familiar to the consumer.

In other words, name and product must become institutionalized in the minds of prospective customers, and thus be made synonyms for particular workmanship and service. Orders may come in greater volume than production is capable of filling them. If this state of affairs is indicative of permanent enlargement of a company's business, then the logical thing to do is to increase its producing capacity rather than to curtail its advertising. On the other hand, if such an uncommon number of orders is judged to be the result of temporary conditions, there is all the more reason for maintaining advertising at its normal stage. If there is ground for supposing that an excess of orders does not warrant enlargement of productive facilities, there is still argument for the continuance of advertising in this, that a percentage of such orders may become the basis for later development of business. It is the business of the manufacturer to have

orders, not goods. Strictly speaking, he can not have too many orders. He produces goods only in response to orders or in preparation for the likelihood of receiving sufficient orders for the commodities which he manufactures. It is the business of the retailer to have goods to sell. In this view of the matter, advertising is part of the cost of production and distribution. It is so recognized by the Government which permits advertising to be scheduled as a necessary expense in making income tax reports.

No matter from what angle the question is approached, it is clear that reduction or cessation of advertising can result in no lessening of essential manufacturing and distributing expenses. The saving would not be a saving, because it would be offset not only by taxation but by loss of institutional influence in the trade—a loss which can be measured ultimately in dollars and cents. Keep on planting the seed of publicity, even if your crop of orders is bigger than you expected. Orders keep the wheels of industry turning.

MORE THAN ONCE it has been pointed out in these columns that a false conception of industrial conditions hurts business and retards progress. The power of suggestion is the most cogent force in the affairs of men. This is illustrated in the effect of exaggeration upon the trend of public opinion. In turn, public opinion becomes distorted. Unrest is magnified from a minor detail to a national evil. The wrong ideas thus derived react upon the orderly development of prosperity. That the actual state of the country is not faithfully reflected in such a psychology is made evident by William Redfield, former Secretary of Commerce, in a recent series of articles.

He declares that for every radical there are ten thousand conservatives; for every striker there are many hundreds of men steady on the job; to meet disorder there are ample forces under control on the side of order. Scare heads and sensational settings are distinctly out of place. They but add to the turmoil. They hurt and do not help. They are unpatriotic as regards the country and unfair as regards the great quiet, thoughtful mass of our citizens. It has been hard to realize when taking up the daily paper in recent weeks that there was anything except excitement and unrest. Yet it is true and the editors know it is true that the greatest fact there is among us today is the sober sense of the average man who abhors the excited and passionate utterances that

are common, and who regards strikes with distinct disfavor, because they put class interest above the national interest and subject the many to injury for the benefit of the few. Nothing is more valuable to-day than a quiet mind.

There is said to have been a proverb among the ancient Jews to the effect that if Israel would repent but for one day the millennium would immediately come. The teaching of this proverb is sound. It may take longer than a single day and we need not expect an actual millennium. It is, however, certainly true that if the people of America would get together and pull together for a few short months it would be hard, when they were past, to bring the forces of disorder again into action.

ONE DOES NOT need to be the seventh son of a seventh son to foresee a continuance of present price levels during the coming year. Indeed, it is not unlikely that in some lines prices will go still higher. Of course, no one is absolutely certain what the morrow will bring. The earth might be struck by a meteor big enough to wipe out the city of Chicago. An earthquake might swallow San Francisco. A tidal wave might sweep away a thousand people along the Atlantic coast. Some terrible pestilence might decimate the nation in a single day. Civilization might be engulfed in another war more appalling and destructive than the conflict which ended a year ago. But these are all remote possibilities. The thought of them does not affect the commerce of the world. No hardware merchant or dealer in warm air heaters hesitates to make plans for next season's business because he fears that our earth may fall into the sun before the wild geese can finish their northward return.

To delay arrangements for next season's supply of warm air heaters in the hope that prices will go down is to gamble against heavy odds. It is depending on what Lord Thurlow called "the accident of an accident." The chances are that twice as many new dwellings will be built next year as have been constructed this year. A shortage of housing accommodations is reported from practically every town in America. Orders for warm air heaters will be more numerous next year than they were during the year which is drawing to a close. The dealer who has the goods will reap the profits. The dealer who puts off buying his stock until the building season opens will encounter serious difficulties in obtaining prompt deliveries. He will find himself in the position of a man with a fertile field and no implements to cultivate it.

Last year dealers were advised in these columns to secure sufficient supplies to meet the normal demand of their trade. Those who followed the advice have had to pay a bigger income tax and they have money in bank. This year the advice is repeated with stronger emphasis. It is not a day too soon to begin lining up next season's prospects. During the first three months of the year there is a comparative slowing down of production. The dealer who places his orders during that time is assured of prompt deliveries. He is, therefore, equipped to handle the warm

air heater business of his district. The man who delivers the goods gets the money. Promises will not heat a house in cold weather. The number of contractors and householders who will pay for a warm air heating plant before it is actually installed is so small that a mouse would starve to death on the amount of food which could be purchased with the money.

THE STRENGTH of the present business situation lies in the fact that commerce keeps up in spite of industrial friction. As pointed out in **Commerce** Dun's Review, impediments to a full **Keeps Up.** measure of economic progress still appear in the widespread labor troubles, in the further fall of foreign exchange rates to new low records and in the delay in the settlement of international political problems, and entire uniformity in business is reported lacking. While both domestic and foreign commerce remain notably active in many instances, yet transactions would be of even greater magnitude if fewer retarding elements were present or if the outlook were not so uncertain as to prompt increasing conservatism in some quarters and postponement of important projects.

Response among miners to the rescinding of the coal strike order has not met expectations, thereby renewing apprehension of fuel shortage, and operations in some other leading lines continues restricted by differences over wages or hours of employment. The effect of the disturbed industrial situation is not alone seen in the reduction of purchasing power that tends to curtail retail buying in some sections, but also in the growing scarcity of goods through limitation of outputs, and in the augmented strength of some commodity markets.

Notwithstanding the recent steady gain in iron and steel manufacture, demands for those products have become so pressing as to force weekly advances in prices, and not a few sellers are already booked so well ahead in 1920 that additional profitable business is being rejected. The prevailing condition in most lines is one of inability to have requirements fully satisfied, and the question of price is still of secondary consideration where needs are particularly urgent or available supplies give no indication of becoming more plentiful.

STRICTLY SPEAKING, MONEY is not wealth. Merely it is a medium of exchange. It represents things produced. It is a device to facilitate the working of commerce. Money can not take the **More Work** place of commodities. It is not edible. **Is Needed.** No nourishment can be derived from it. A man would starve to death with a shipload of gold, if he could not exchange some of it for food. He would freeze to death, if he could not trade some of it for fuel, clothing, and shelter. The essential thing, therefore, is the commodity. Practically every problem of society is intimately bound up with the production of things needed for life and culture. In the present welter of strikes and theories and economic experiments, one fact is distinct—the fundamental urgency of greater production. Wages

and working conditions are secondary to this paramount necessity. Indeed, these details will adjust themselves when production is increased in quantity, efficiency, and quality. For five years of war and preparations of war, the production of commodities for the use of the people fell far below the normal levels of daily requirement. Destruction of buildings and supplies of all description helped deplete the stocks of the world. Many store shelves are still empty, many houses unbuilt, and many prime necessities are unsupplied. What the world needs, therefore, is a speeding up of production. The doctrine of overproduction taught by some economists has no foundation in fact. The great danger to civilization is underproduction; and underproduction connotes misery, poverty, and suffering.

RANDOM NOTES AND SKETCHES.

By Sidney Arnold.

Condensed into a single sentence, Henry Ward Beecher stated a truth which could easily be elaborated into a volume when he said: "He that has character need have no fear of his condition. Character will draw condition after it."

* * *

We were discussing the alarming scarcity of houses to rent, and my friend Harry Van Bayse, of American Furnace Company, St. Louis, Missouri, told this story:

Mr. Johnson was wending his way home, after a tiring day house hunting with no result. Passing along by a river he heard a splash. Horrors! There was a man struggling in the water. Could it be? Yes—it was his friend, Mr. Robson. Disregarding his appeals for help, Johnson made a rush for Robson's house agent.

"Excuse me," he said, breathlessly, "but can I have Robson's house? He has fallen in the river and is drowning."

"Sorry," said the plaster faced house merchant, "but you're too late. I've already let it to the man who pushed him in."

* * *

Emerson's law of compensation received a new exemplification in the family of neighbor of my friend, Tom Gallavin of E. C. Stearns and Company, Syracuse, New York. He overheard the neighbor in the following brief colloquy:

"Well, doctor, boy or girl?"

"Triplets, my dear sir!"

"Hurrah! Three income tax exemptions."

* * *

Traveling salesmen do not always sleep in a bed of roses, notwithstanding popular notions to the contrary, says my friend, James R. Graves, sales representative for the Detroit Vapor Stove Company, Detroit, Michigan, in the territory around Chicago. He relates the following experience:

The little country inn was picturesque, but leaky.

Late one night my friend Graves rang his bell urgently, and the landlord went to see what was the matter.

"I say, look here!" snorted the indignant Graves,

who was still in bed. "This roof's letting in the rain, and I'm drenched!"

"Very good, sir!" remarked the landlord amiably, as he retired.

A few minutes later he came back with a large wash tub.

"This will make things right, sir," he said, still amiably. "I'll just put this on your chest; then, when it's full, ring the bell, or shout out, and I'll have another empty one ready!"

* * *

One of the best darkey stories which I have heard in a month of Sundays was related to me as follows by my friend, Thomas E. Henry of the Henry-Miller Foundry Company, Cleveland, Ohio:

"This is the fourth morning you've been late, Rufus," said the man to his colored chauffeur.

"Yes, sah," replied Rufus. "I did oversleep myself, sah."

"Where is that clock I gave you?"

"In my room, sah."

"Don't you wind it up?"

"Oh, yes, sah. I winds it up, sah."

"And do you set the a:arm?"

"Ev'ry night, sah, I set de alarm, sah."

"But don't you hear the alarm in the morning, Rufus?"

"No, sah, dere's de trouble, sah. Yer see de blame thing goes off while I'm asleep, sah."

* * *

The other day my friend, Harvey Manny, of the Central Heating and Supply Company, Chicago, Illinois, was talking with an Englishman who said the people here were too solemn, and exclaimed:

"Why, even your newsboys can't take a joke!"

My friend Manny replied: "Just try the next one that comes along with some nonsense and see if he can't answer you."

The Englishman agreed and stepped up to a newsie saying, "Hello, youngster, look at your nose and tell me what time it is."

The boy quickly retorted, "Aw, look at your own, mine ain't running!"

* * *

It is amazing to consider how much we depend upon the trustworthiness and performance of the average man. The engineer who operates the train in which we ride, the baker who makes the bread which we eat, the workers who build the bridge over which we walk, and scores of other persons combine to give us the necessities and comforts of life—and they are all average folk. Margaret E. Sangster puts this into verse as follows:

The Average Man.

When it comes to a question of trusting
Yourself to the risks of the road,
When the thing is the sharing of burdens,
The lifting the heft of a load.

In the hour of peril or trial,
In the hour you meet as you can,
You may safely depend on the wisdom
And skill of the average man.

'Tis the average man and no other
Who does his plain duty each day,
The small thing his wage is for doing,
On the commonplace bit of the way.

AMERICAN ARTISAN

A. H. VAYO.

It is no disparagement of the character of A. H. Vayo to say that as a diplomatist in the days of Talleyrand, he would have been a complete failure. He is Sales Manager for Eclipse Manufacturing Company and is too straightforward and too sincere for subterfuge and double-dealing. He would be the last man in the world to accept the Talleyrand dictum that language is for the purpose of concealing thought. Indeed, he is not even a good poker player. The frankness of his countenance is against him in that game of guile and facial craftiness. This does not imply condemnation of poker players. The game may be indulged in without appreciable loss of morals. Honest men find diversion in it. Some preachers denounce it, and reformers regard it as a corrupting influence. This is not the place, however, for a theological or ethical discussion of poker playing. Reference is made to it only to illumine the meaning of a statement. Let the Puritans fight it out among themselves. A. H. Vayo is not one of them. He is too broad in his sympathies and too liberal in his views of practical affairs to allow himself to be compressed into the narrow mould of any class of doctrinaires.

At school he bore a title of greater significance and value than any honor within the gift of the universities, namely, that of "a regular fellow." He was born in Lockport, New York, July 12, 1872, and was educated in the public schools of Rochester, New York. The first position that he ever held was in a drug store paying him the staggering sum of one dollar per week. He soon reacted against the environment of asafetida, castor-oil, liver pills, and aches and pains. He was not destined for pharmacy. His abounding vitality revolted against the constant suggestions of disease and gloom which emanated from every shelf of the drug store. Moreover, he calculated that, at the prevelant rate of increase, it would require four hundred and ninety-seven years, six months, and three days for his weekly stipend to reach an amount which would enable him to open a checking account in any bank. He, therefore, gracefully withdrew from the business of materia medica.

After several ventures into other avenues of wage-earning, he went into the equipment business with his father and two uncles, calling on the jobbing trade for their company all over the United States. He learned that the majority of the people west of the Ohio River speak the same language as those living along the Atlantic seaboard. Moreover, he discovered that few of them mistook the name of Shakespeare for the label of a now forbidden brew, in spite of the fact that the corpulent Falstaff had long before stepped out of the pages of the Bard of Avon to lend the sanction of his avoirdupois to a foamy beverage of the West. Also he acquired a perception of the bigness of American men of business in the hinterland far beyond the glitter of Broadway's multiple lights. Being quick of mind and warm of heart, he rapidly mastered the principles of salesmanship, and won welcome among customers in every part of the country in which he journeyed. He was not satisfied to sell commodities. He added to them values of service and good fellowship.

Early in his career of salesmanship, he became thoroughly imbued with the conviction that the best line of goods in the world needs the magic of friendliness to keep it continuously in the market. It was not necessary for him, however, to put forth deliberate effort in order to acquire this desirable quality. It was born in him. It is as much



of the essence of his nature as the heart which beats in his body. In the logical development of his talent along these lines, he reached his present position as Sales Manager of the Eclipse Manufacturing Company, Indianapolis, Indiana. Here he deals with spark plugs, literally and metaphorically. He trains salesmen by packing their mental cylinders full of ambition, knowledge, and enthusiasm, and then, when they are under full compression, advances the spark and sends them forth in high gear for big orders. He belongs to all the Masonic bodies and the Shrine. He holds membership in the Chamber of Commerce and Marion Club of Indianapolis, Indiana, the Cleveland Athletic Club of Cleveland, Ohio, the Old Colony Club, and is a Director of the Hardware Club of Chicago.

HALL OF FAME

CHARLES E. HALL.

Life may be compared to a fallow field. With rare exceptions, all have equal access to its possibilities. Broadly speaking, the physical equipment with which everyone begins cultivation of the soil of existence is the same. All babies look alike except to the discerning eyes of their mothers. The human brain contains such enormous potentialities that the most striking difference between individuals are insignificant in comparison with what all possess in the way of mental energy. Some notion of what this means may be gathered from the fact which science makes known to us that a cubic millimeter of the tissue of the brain contains energy equivalent to a million horse power station operating forty million years. The personal differences, therefore, of success and failure, of ambition and sluggishness, of efficiency and stupidity are not the result of lack of power. They grow out of variations in the use of that power. The harvests of the field of life are measured by the amount and intensity of its cultivation.

These are simple truths. It seems almost a waste of time to repeat them. But mankind is slow to learn. The most elementary units of knowledge require long and frequent repetition in order to influence thought and purpose. Always it is better to express these truths in terms of concrete examples rather than in academic phrases. The natural process of the human mind is to build up ideas from things rather than from abstract concepts. A single example of a man who embodies in himself the lesson of cultivation of life's possibilities is worth a shipload of precepts and philosophical elaborations.

Such an example is available in the career of Charles E. Hall, President of the Hall-Neal Furnace Company, Indianapolis, Indiana. He differs from hundreds of other men who came into the fallow fields of life at the same time as he, because he applied intensive cultivation to its possibilities. At the outset he was the same as they in every essential element of human nature.

At school in Oxford, Indiana—where he was born, March 10, 1874—and later at Kokomo, Indiana, he was not conspicuously more intelligent than the aver-

age run of school boys. That is to say, he was healthy, normal, fond of sport, and interested in the things which engage the imagination of youth. The quality which distinguished him in the class room was the habit which he displayed of wanting to know thoroughly the material of every lesson. He made it his business to understand—which is only another form of mental cultivation—and he carried this habit into the business world. He received a high school education and took a course at a business college in Indianapolis, Indiana. His first employment was as clerk in a bank. Here eight profitable years were spent, three of them as Assistant Cashier. The experience thus acquired served to develop his business abilities in a direction not usually followed by the average merchant or manufacturer.

In 1902, he entered the hardware trade in the firm of Harmon and Hall and took a special interest in the warm air heater department. He studied this part of the business not only from the merchandizing side, but also from the angle of manufacture. He cultivated every opportunity for enlarging his knowledge. He took pains to read all available literature on the construction and installation of warm air heaters and thoroughly familiarized himself with shop practices, methods of workmanship, the chemistry and physics of the metals used in the making of warm air heaters, factory economy, problems of distribution, and,

in a word, everything which could enable him to cultivate the possibilities of the warm air heater industry.

In 1916, the firm of Harmon and Hall was succeeded by the Hall Hardware Company, Indianapolis, Indiana. Two years later, in 1918, he organized the Hall-Neal Furnace Company, of Indianapolis, Indiana.

He takes an active interest in both the Indiana Retail Hardware Association and the National Retail Hardware Association. He is a member of the Board of Directors of the latter body. His hobby is golf and fishing. Every year he contrives to get away for a trip to Minnesota west of Duluth. He is of genial disposition and possesses an unusual power of adaptability to make friends among people of every shade of opinion.



UP TO THE MINUTE NEWS SIFTINGS

The Advance Stove Works, Evansville, Indiana, is having plans drawn for a plant addition, two-stories, 30x50 feet.

OPENS WAY TO A SETTLEMENT OF LABOR DISPUTES AND SHOWS WAY TO PROSPERITY.

Industry can not and will not tolerate domination by unions. For the past three years radical elements in the unions of Seattle, Washington, held almost absolute sway over production in that city. The result was increased cost of manufacture and lessened output. Seattle is a flourishing city on the Pacific coast. Its citizens see the opportunity of making it the greatest city on the Western coast. Americanism born of equal opportunity of all men is now breaking the bonds of irrational unionism. Seattle is rapidly becoming aware of the stimulus to industry and the justifiableness of the "open shop." The responsible citizens of that city have declared their independence of any group which seeks to control the destinies of Seattle's Commerce. They will not deal with radical union leaders whose actions, tactics, and sentiments are identical with the I. W. W. The declaration for the unhampered forward march of industry does not mean—as the radicals would have unthinking laboring men believe—a restriction in the benefits to be derived by labor out of increased production. It is in their interest. In Seattle they do not call this desirable relation between employe and employer the "open shop." The term has been misused. It is designated as the "American Plan of Employment." This is defined by the Associated Industries of Seattle as a system under which every man shall be protected in his inalienable right to work, regardless of political, religious or labor affiliations; that every employer shall be protected in his right to run his own business and to hire employes without having to gain the permission of an autocrat of labor. To sensible employes of that city the above plan will be accepted as an advantage and as an open road to prosperity. It is believed that the majority of them are sensible.

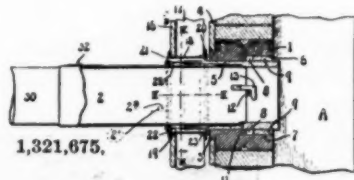
The movement for the American Plan of Employment has spread from Seattle to other cities of the Pacific coast. This plan, asserts the Associated Industries of Seattle, has been proved so satisfactory that they expect it to sweep the country. When other sections of the nation learn that the right of all Americans to work without being subjected to coercion and intimidation can be established by the elimination of radicals from the unions and refusing to deal with organizations whose demands savor of I. W. W. ism, they will realize the practicality of the plan tried and gaining favor in Seattle, Washington. San Francisco, Portland, Spokane, and Tacoma have organized "As-

sociated Industries" on the Seattle plan. In view of imported radicalism the Pacific coast is making a new declaration of independence for America.

PROCURES PATENT FOR STOVEPIPE THIMBLE AND FASTENER.

Under numbers 1,321,675 and 1,321,676, United States patent rights have been granted to Ralph Shurtleff, St. Louis, Missouri, for a stovepipe-thimble and stovepipe fastener described as follows:

Number 1,321,675:

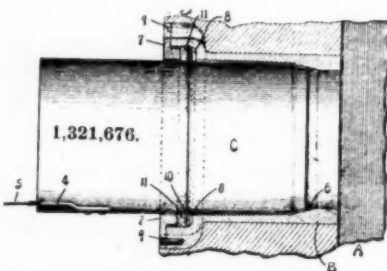


* An article of the character described comprising a frame adapted to be mounted in a flue opening, a thimble secured to said frame and projecting beyond an end thereof, a tube surrounding the projecting end of said thimble, and a collar cooperating with said tube to form a chamber, the joints of which are sealed.

2. An article of the character described comprising a frame adapted to be mounted in a flue opening, a thimble secured to said frame and projecting beyond an end thereof, a tube surrounding the projecting end of said thimble, and a collar secured to said thimble and cooperating with said tube to form a chamber, the joints of which are sealed.

3. An article of the character described comprising a frame adapted to be mounted in a flue opening, a thimble secured to said frame and projecting beyond an end thereof, a tube surrounding the projecting end of said thimble, a packing surrounding said thimble to which the inner end of said tube is fitted, and a collar cooperating with said tube to form a chamber, the inner end of which is closed by said packing.

Number 1,321,676:



A device of the character described comprising a stove pipe thimble having an annular pocket at its forward end and having an annular tapered seat therein intermediate of its

ends, a stove pipe section having an annular flange intermediate of its ends which is seated in said pocket and having a tapered rear end engaging said tapered seat, an annular packing in said annular groove in front of the flange of said stove pipe section, an annular presser member at the front end of said thimble having a rear extension.

NOMINATE OFFICERS FOR NEXT TERM.

The following members of the Stove Salesmen's Association of Pennsylvania, Philadelphia, Pennsylvania, have been nominated to serve as officers of the organization for the ensuing term:

President: FRANK S. HAWKEN;
 First Vice-president: JOHN W. ABBOTT;
 Second Vice-president: WILLIAM H. YOUNG;
 Third Vice-president: HARVEY J. FUELLER;
 Secretary: JAMES MCGAW;
 Treasurer: OLIVER M. FAGLEY;
 Trustee: HARRY E. BORZELL.

The annual reception and banquet of the Association will be held December 17, 1919, at the Hotel Walton, Philadelphia, Pennsylvania. A delightful program has been arranged for the occasion and a large attendance is expected.

REGISTERS OAK LEAF TRADE MARK.

The oak leaf trade mark shown in the accompanying illustration has been registered at the United States Patent office, Washington, D. C., by William E. Deers Manufacturing Company, Walden, New York. The particular description of goods is: Stovepipe; Gas, Coal, and Wood Stoves; Portable Ovens, Claims use since March 8, 1912.

**SALESMAN NEEDS ENTHUSIASM.**

Some men are naturally enthusiastic. They bubble over with enthusiasm. Others are quite lacking in that quality, and they have to get along on the enthusiasm of others which does not keep them properly keyed up. For a salesman to try to raise himself without enthusiasm is a good deal like trying to lift yourself by your own bootstraps.

REGISTERS STOVE TRADE-MARK.

United States Patent office registration has been granted to the Detroit Vapor Stove Company, Detroit, Michigan, for the trade-mark shown in the accompanying reproduction. The mark consists of a star colored red, together with the words "Red Star." The particular description of goods to which the claim applies is: Gas, oil, and coal burning stoves.

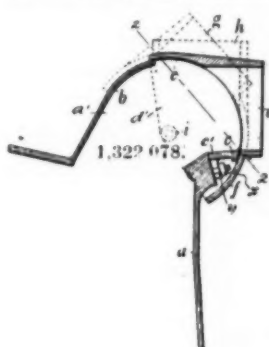
**LACK OF SYSTEM SPELLS RUIN.**

When the industrial world is startled by the failure of an old established firm, the reason can usually be found that younger men just from college are not content, as were their fathers, to begin learning the business from the ground floor, and that departments left to superintendents who know of the deficiency of the head and with no one to check their errors fail to keep up the standard of the product or to stop the leaks. Lack of system, waste of energy, friction and

want of competent direction will seal the doom of any house.

PATENTS A FLUE-JOINT.

Harry James Yates and Cornelius Heggie, Birmingham, England, assignors to John Wright and Eagle Range, Limited, Birmingham, England, have obtained United States patent rights, under number 1,322,078, for a flue-joint, described herewith:



The combination with a stove outlet flue having two parallel side walls, a top wall having its outer surface curved to coincide with an imaginary segment of a cylinder and a bottom bar having its outer surface curved to coincide with said segment, of a flue connecting piece having two parallel walls

which snugly engage the parallel walls of the outlet flue and are pivoted on an axis forming the center of the imaginary cylinder, said piece also having curved inner surfaces which are parallel to the curved surfaces of the outlet flue top wall and bar, said bar being adjustable toward and away from one of the curved surfaces on the connecting piece.

LESSENS POSSIBILITY OF FIRES.

Accidents will happen. However, accidents that are avoidable are not excusable. It is the report of authorities that a large percentage of the fires in this country are preventable. Usually through carelessness or defective apparatus fires are started. In the accompanying illustration is shown the Safety Interlock-



Safety Interlocking Stove and Warm Air Heater Pipe, Made by the Safety Interlocking Stove Pipe Company, Mount Pleasant, Iowa.

ing Stove and Warm Air Heater Pipe made by the Safety Interlocking Stove Pipe Company of Mount Pleasant, Iowa. When this pipe is used in connection with the safety flue thimble, cap, and elbow, produced by the Interlocking Stove Pipe Company, a substantial step toward prevention of fires has been taken. With ordinary attention these pipes, thimbles, and caps will last a long time. Various sizes may be obtained. They can also be made up in accordance with specifications submitted. The Safety Interlocking Stove Pipe Company, Mount Pleasant, Iowa, will furnish those interested with details pertaining to its products.

WAS ONCE MERE INCIDENTAL.

Advertisements were once a mere by-product. They were inserted in newspapers and other periodicals whenever there was space. Now they are an economic necessity. It does not take a very vivid imagination to picture with exact certitude what the fate of a non-advertising merchant would be.

THE WEEK'S HARDWARE RECORD

Of Interest to Manufacturer, Jobber and Retailer

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing western hardware and metal prices corrected weekly. You will find these on pages 38 to 43 inclusive.

The Acme Wire Company, New Haven, Connecticut, has let a contract for a storage building, 35 x 50 feet.

The Lynn Machine and Screw Company, Lynn, Massachusetts, has been organized to manufacture screw products.

The William Scholhorn Company, New Haven, Connecticut, pliers and tools, will build a four story, 40 x 140 foot plant.

The Bridgeport Hardware Company, Bridgeport, Connecticut, has let the contract for a two-story, 40 x 125 foot plant to cost \$35,000.

The Olson Manufacturing Company, Worcester, Massachusetts, screw machine products, has purchased a site on which it plans to erect a plant.

The American Steel and Wire Company, Worcester, Massachusetts, will erect a one-story machine shop 20 x 100 feet, at its South Works.

The O. B. North Company, New Haven, Connecticut, makers of hardware, have let the contract for a 25 x 56 foot factory addition to be used for annealing purposes.

The Res Manufacturing Company, Milwaukee, Wisconsin, 2907 Meinecke Avenue, hardware specialties, has a permit to erect a two-story shop addition, 31 x 50 feet, to cost \$15,000.

Articles of incorporation have been filed by the Daniels Washing Machine Company, Milwaukee, Wisconsin. The capital is \$25,000. H. D. Townley is among the incorporators.

The Howard Wire Products Company, Kokomo, Indiana, has been incorporated with \$35,000 capital to manufacture metal wire, by M. A. Brown, Henry F. Quigley, James F. Milner, and R. Porter Jay.

The Vitreous Enameling and Stamping Company, 11 East 147th Street, New York City, which was recently organized with \$300,000 capital, is having plans prepared for a plant, one-story, 95 x 172 feet.

The Doman Manufacturing Company, Oshkosh, Wisconsin, which recently acquired the plant and equipment of the Oshkosh Washing Machine Company, will build a one-story addition, 25 x 200 feet.

WASHING MACHINE MANUFACTURERS PREPARE FOR ANNUAL MEETING.

The fourth annual meeting of the American Washing Machine Manufacturers' Association will be held January 21 and 22, 1920, in Hotel Sherman, Chicago, Illinois. Plans have been completed for mak-

ing this the best and most instructive gathering in the history of the organization. Progress has been made in methods of distributing washing machines. By means of collective discussion, many of the defects of the earlier system of merchandising have been pointed out. Measures for the elimination of these defects have been taken through the united influence brought into action by organization. The American Washing Machine Manufacturers' Association, by coordinating the efforts of its members, has already developed the industry to a stage where the interests of producer, distributor, and consumer are harmonized through fair dealing and adequate service.

Much credit is due Raymond Marsh, Chicago, Illinois, Secretary of the American Washing Machine Manufacturers' Association for the thoroughness and enthusiasm with which he carries on the work of his office. He has been largely instrumental in interpreting the purposes of the American Washing Machine Manufacturers' Association and in presenting its policies before various influential organizations in the trade.

SHOWS COST OF BUILDING IN 1918.

The United States Geological Survey, Department of the Interior, announces the publication of a report on building operations in the larger cities of the United States in 1918. This report shows the cost of such work in a large number of cities of the country for ten years and contains a diagram showing the great decrease caused by war conditions. It also shows the cost of buildings in these cities by character of buildings—that is, wooden, brick, stone, concrete, or steel skeleton buildings—and the cost of additions, alterations, and repairs, by classes of buildings. A copy of this report may be obtained by applying to the Director, United States Geological Survey, Washington, D. C.

QUICK TURNOVER BRINGS PROFIT.

To insure quick turnover the retailer must buy frequently and he can do this only by depending on the wholesaler. Dollars ought to be made to work. A dollar that is not working is a slacker. A retailer who turns his stock four or five times a year, if he makes a legitimate profit, will make money. The man who turns his stock twice, or less—and many do no better than this—can not make money. He may live, but he will realize nothing on his invested capital.

It is a salesman of the higher order who devotes his energy to the moving of old stock and "slow sellers." Such a man is more than a clerk; he has the makings of a merchant.

A WINDOW DISPLAY COMPETITION IS A GUIDE TO INCREASE IN VALUE OF SHOW SPACE.

A large retailer estimates his window space at \$150,000 a year. What is yours worth? Nothing, unless you trim and arrange articles for sale in it. There is no doubt of the fact that the location of the store has a preponderating effect as to the value of the window space. However, no one will deny that even the \$150,000 show space can be rendered worthless by uncouth and uninteresting displays. By careful planning and accurate thinking you can make the value of your window increase. It takes time and patience coupled with enthusiasm. Study the many factors that make for better displays. Augment the attractiveness of your window with each succeeding display. Always bear in mind that you have not done your best and will do the best next time. Take pride in your work.

It will surprise you how much the value of your window space will increase after conscientious work and thought spent on its betterment. You will find, if you are of an observing nature, that with each new display your skill will increase. A diamond is drab looking in its rough, natural state, and would be passed up for worthless by the average individual. The same stone cut and polished is universally recognized as a valuable asset. Your window comes under this illustration. Unadorned, neglected, and misarranged, it is worthless. With careful work and right planning it becomes an acknowledged value. One of the main goals to strive for in window displays is to make each display decidedly more gainful than the last one. Take a photograph of one of your "masterpieces" and send it to AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition. Here comparative worth of the study and time spent in the profitable venture of window displays will be ascertained. No qualifications other than that of being connected with the hardware business or its allied trades is required. Brains will win the prizes offered. Will it be yours? Try. Read the simple rules governing the Window Display contest attached herewith and begin now to plan your "masterpiece."

Award of Prizes.

The prizes will be awarded as follows:

First prize, \$50.00 in cash, for the best photograph and description received of window display of hardware or kindred lines;

Second prize, \$25.00 in cash, for the photograph and description second in merit;

Third prize, \$15.00 in cash, for the photograph and description third in order of excellence;

Fourth prize, \$10.00 in cash, for the photograph and description fourth in degree of worthiness.

Conditions of Competition.

The conditions of the competition are as follows:

The photograph must be accompanied by descriptions of how the window displays were arranged and the materials used. The description is important and hence should be adequate. These photographs and descriptions may be sent by mail or express, charges prepaid, and must reach this office not later than Feb-

ruary 2, 1920. Address all photographs and descriptions to AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition, 620 South Michigan Avenue, Chicago, Illinois.

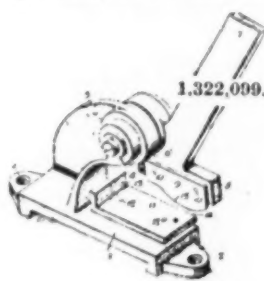
Each photograph and description must be signed by a fictitious name or device and the same name or device must be put in a sealed envelope containing the real name and address of the contestant. This sealed envelope is to be enclosed with the photograph. Contestants are permitted to enter as many photographs of displays as they please.

A Competition Committee of three will be appointed. One of them will be an expert window dresser and one an experienced hardware man. This Committee will pass upon the merits of all photographs and descriptions received, without knowing the names or addresses of the senders, and will decide the winners of the Competition.

AMERICAN ARTISAN AND HARDWARE RECORD reserves the right to publish all photographs and descriptions submitted.

SECURES PATENT FOR SHEARS.

Under number 1,322,099, United States patent rights have been granted to Thomas J. Fegley and George O. Leopold, Philadelphia, Pennsylvania, assignors to North Brothers Manufacturing Company, Philadelphia, Pennsylvania, a Corporation of Pennsylvania, for a shears described in the following:



The combination in shears, of a base; an overhanging bearing cast integral with the base; a bed plate mounted on the upper surface of the base and having an upwardly projecting flange at its inner edge; screws for securing the bed plate to the base; a lever pivoted to the bearing and having an integral handle and body portion, the body portion extending on the same side of the pivot as the handle; and a blade attached to the side of the body portion, the body portion being recessed to receive the blade, the blade having a curved cutting edge so shaped that when the lever is drawn down the blade will have a shearing movement past the edge of the base plate.

STUDY MODERN SALESMANSHIP.

When a salesman enters the employ of a large concern, no matter what his previous experience, he is put through a course of salesmanship under the supervision of a salesmanager. Why? Salesmanship is now almost a science. And the large dealers of today are not going to take a chance on their salesmen using the old methods. They want to make sure that they use the new, and more efficient ways of approaching customers in order to get their business. Logic would say, what is good for large dealers would be just as good for small dealers. Learn salesmanship. Study the modern methods of doing business. It means more money for you.

Advertising is exact in spirit and in principle.



HARDWARE CLUB OF CHICAGO AND ITS DOINGS



HARDWARE CLUB OF CHICAGO GIVES BRILLIANT RECEPTION TO ITS NEWLY ELECTED PRESIDENT.

A brilliant reception and banquet, seldom equalled and never surpassed in the history of the organization, was given Saturday evening, November 22, 1919, by the Hardware Club of Chicago to its newly elected



Allan J. Coleman, Newly Elected President Hardware Club of Chicago.

President, Allan J. Coleman. The spacious rooms of the Club, on the eleventh floor of the State and Lake Building, southwest corner State and Lake Streets, Chicago, Illinois, were packed to their utmost capacity. The main dining room was enlarged by opening the wide doors which separate it from the special dining room. Every table was occupied. Everybody was in good humor. The women were attractively gowned, gracious, and smiling. The men had left the cares of business behind them, and were in high spirits.

No homeopathic portions of food were served at the banquet. The menu was ample in quality and kind, thus maintaining the culinary traditions of the Club. In fulfillment of the doctrine that music and laughter are the best tonics for appetite, a diverting vaudeville was given during the courses. A black faced comedian entertained the diners with a monologue which would upset the dignity of the Supreme Court of the United States, and make the most confirmed misanthrope break into ripples of merriment. He varied the performance with two cornet solos, artistically rendered. Sentimental songs, free from touches of sadness, were sung in a pleasant voice by a young lady from one of

the local theaters. Both of the performers were repeatedly encored, and responded with a promptness that showed their appreciation.

At the close of the banquet, the newly elected President, Allan J. Coleman, of Chicago, Illinois, addressed the assembly. He did not make a formal speech. He talked to the people present in the same jolly, good natured way in which he talks to an old friend in the sitting room of his home. He struck the right note at the outset. In a simple sentence he summed up the essential spirit of organization. Volumes of oratory and libraries of heavily labored phrases could not so effectively express that spirit as his opening words: "Let's be just folks."

He pictured the club as a friendly institution. Its first purpose is not to afford a meeting place for the transactions of business. On the contrary, it is intended to fashion bonds of fellowship among the people in the hardware industry. The human element is the most important factor in business. Confidence and comradeship do much to make the interchange of commodities a constantly improving process. No en-



William D. Lewis, Newly Elected Vice-President Hardware Club of Chicago.

terprise can thrive on purely commercial grounds. There must be sympathy of ideals and methods in its personnel. He placed strong emphasis upon the good which the Hardware Club of Chicago can accomplish for all those which come within the sphere of its influence.

Urging everyone to make the most of the occasion, he said: "If you acquire one new friend tonight, you

will have spent a very pleasant and profitable evening. There is no asset which assays higher values than that of friendship. It is the thing which makes life worth living. It softens the hardest blow of disaster. It dissolves grief and worry. It takes the sting out of defeat. Through its potent magic despondency is lifted from the shoulders and men walk erect again toward new horizons of hope."

He declared that the benefits which the Hardware Club of Chicago can place within the reach of its members constitute the reason why they should come as often as possible to the Club. The big accomplishment of the Hardware Club of Chicago, he said, is that it dispels gloom. "When you come here you renew your courage and optimism. Smiles are contagious. Good humor promotes health and increases efficiency. Let's all be just folks."

At the close of President Allan J. Coleman's delightful talk, a drawing was held for six baskets of yellow asters which had been placed on various tables throughout the dining hall. The flowers were won by the following ladies:

MRS. W. J. BOWLER.
MRS. R. C. RIDPATH.
MISS LOIS R. CUMMING.
MISS MERRIL RAMSAY.
MISS ADELAIDE TREICHEL.
MRS. O. J. SHIELDS.

It was then announced that tables had been arranged for card games open to all who cared to take part in the playing. The dining room was quickly cleared of its tables to give space for dancing. So thoroughly was the dancing enjoyed by the gathering that the card tables failed of their attraction and the games accordingly were abandoned. The remainder of the evening was devoted to waltzes, fox trot, two step, Virginia reel, and other up-to-the-minute dances. There was not so much as a split second of an interval of dullness during the evening, thanks to the energetic and genial Entertainment Committee, consisting of H. A. Squibbs and John S. Kandy.

Prizes were given to the best waltzers and the decision was made according to the degree of the applause of the onlookers as interpreted by John S. Kandy. In rendering the rewards he said such comical things that he kept the whole gathering in an uproar of laughter. The winners of the prizes are:

First prize—A pair of scissors.
W. D. Lewis, Vice President.
Mrs. H. H. Kuhl.

Second prize—A pair of scissors.
O. J. Shields and wife.

Third prize—French flasher.
Ed. E. Williams and wife.

Fourth prize—Large hunting knife.
C. H. Badgley and wife.

The newly elected officers of the Hardware Club of Chicago were delighted with the success of the reception and entertainment. It proved to them that the members of the organization were heartily in accord with them and that they can rely upon the good will and support of every member in carrying out the plans of their administration. The officers are:

President: ALLAN J. COLEMAN,

Vice-President: W. D. LEWIS,

Secretary: W. S. KENNEDY,

Treasurer: JOHN PATTEN.

Board of Governors:

ALLAN J. COLEMAN	ANDREW HOFFMAN
W. D. LEWIS	CHARLES MEACHAM
W. S. KENNEDY	ELMER MERCIL
JOHN PATTEN	H. G. GROSSE
HENRY STUCKART	B. M. MOORE
H. A. SQUIBBS	JOHN S. KANDY
ALBERT VAYO	A. VERE MARTIN
H. H. HOPKINS	

It is the intention of the management of the Hardware Club of Chicago to keep its winter activities at a high pitch of interest. Entertainment, noonday lectures and addresses, and various friendly meetings have been planned in conjunction with the general campaign for increase of membership.

HAS LARGE PROSPECTIVE FIELD.

"Safety First" is a national slogan. But it has been spread broadcast in a restricted sense. "Safety First," should be a slogan in the protection of the home—not only safety in case of an emergency, but safety at all times. The average citizen desires always to be on the safe side. Firearms are looked upon with



Illustration of Safety Features of Iver Johnson Revolvers, Made by Iver Johnson's Arms and Cycle Works, Fitchburg, Massachusetts.

disdain because of their traditional unsafety. In many homes the need for protection is felt. Rather than run the risk of an unsafe weapon—a weapon that is

liable to explode at the slightest mishap—people are willing to trust to the mercy of intruders. Thus there is a large field of prospective purchasers if dealers conscientiously join hands in cooperation with the Iver Johnson's Arms and Cycle Works' National advertising campaign. The main issue, among others, is the absolute safety features of its revolvers. As an expressive slogan it has adopted the phrase—"Hammer the Hammer." The illustration in connection with this slogan in its national advertising has gained the notice of the public. It is up to the local dealer now. He must drive the message home in his territory. And not only is the Iver Johnson revolver a safe weapon to have in the home, but it is "The Safe Revolver to Sell," say the Iver Johnson's Arms and Cycle Works. A communication addressed to either of its three branches will receive immediate attention. They are located at 354 River Street, Fitchburg, Massachusetts, 99 Chambers Street, New York City, and 717 Market Street, San Francisco, California.

The second or creative stage of a powerful man or of anything a powerful man does, always seems to involve advertising.

FINAL COST MEASURES ITS VALUE.

The true measure of value in a tool, states the Coes Wrench Company, of Worcester, Massachusetts, manufacturers of the Coes Steel-Handle Wrench, depicted herewith, is not the first or



Coes Steel-Handle Wrench, Made by the Coes Wrench Company, Worcester, Massachusetts.

apparent cost, but rather the last or real cost. There are wrenches, they say, that can be bought much cheaper than their make, but, in the end, the cost caused by inefficient service and short length of usage brings the price up far beyond the actual cost of their products. There are only six solid whole parts to the entire Coes wrench in the accompanying illustration. The steel shell handle is internally supported. Screw parts are accurate. This wrench is one of the many manufactured by the Coes Wrench Company, whose 78 years of experience have enabled them to produce tools of unusual quality. Pains-taking care is exercised in each and every process. From the forging of the steel to the assembling of the finished parts precision in detail is the guiding principle. The simplicity of these wrenches adds to their durability. In fact, declare the manufacturers, one of the quickest ways to sell a Coes Wrench is to lay the article beside a diagram showing the parts comprising the wrench. The sturdiness of each part, they say, will recommend itself to mechanics. Send to the Coes Wrench Company, Worcester, Massachusetts, for details concerning its line of wrenches.

MAKES FOR BETTER SERVICE.

Fraternize with your clerks. They will like their work better. If you unduly boss they will hold a grudge against you. Circumstances may tie them to their job, but they will vent their dislikes in some manner—not a favorable one to the healthy growth of your business. Kindness and consideration are compensated in various ways. The magnetism of good cheer will be evident in satisfied customers and an efficient, conscientious sales force.

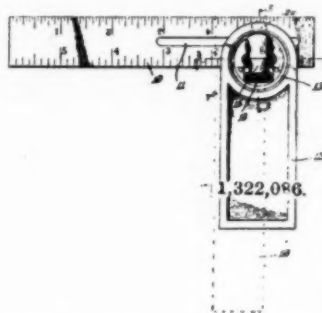
FARM DYNAMITE BOOMS SALES.

In the production of its dynamite for farm purposes certain ingredients are included which rob it of much of its dangerous quality without reduction of its utility, says the Hercules Powder Company, 1 West 11th Street, Wilmington, Delaware. This appeals to the progressiveness of the American farmer and makes him, after one trial, a steady customer for this product, it is claimed. Ditching is efficiently done with Hercules Dynamite. With few exceptions, ditches can be excavated by the proper use of dynamite for blowing

out all of the earth, or a major part of it, leaving the remainder in a loose, easily workable condition, that can be handled at a minimum cost by shovel or light horse scrapers. Interesting booklets describing the uses and sales of dynamite will be sent to those interested if a letter is addressed to the Hercules Powder Company, 1 West 11th Street, Wilmington, Delaware.

GETS PATENT FOR A SQUARE AND BEVEL BLADE FASTENING.

United States patent rights have been obtained by Christian Boomer, New Britain, Connecticut, assignor to The Stanley Rule and Level Company, New Britain, Connecticut, a Corporation of Connecticut, under number 1,322,086, for a square and level blade fastening, described as follows:



In a device of the character described, the combination of slotted blade, a handle member having a shoulder, a clamping device consisting of a spindle having one end loosely connected with the slotted blade, a clamp nut on the opposite end of the spindle and a sleeve interposed between said clamp nut and said shoulder of the handle member.

AIMS TO PRODUCE SUPERIOR GOODS AT A MODERATE COST.

The aim of Henry Disston and Sons, Incorporated, Philadelphia, Pennsylvania, is to manufacture a supe-



Disston Saw, Made by Henry Disston and Sons, Incorporated, Philadelphia, Pennsylvania.

rior quality of goods at a cost to make them purchasable by all mechanics. Illustrated herewith is a saw of their make. Since 1840 this firm has been supplying mechanics with tools of a standard quality. They have set many examples for fineness in the production of various products. All Disston handles are made of carefully selected lumber, thoroughly seasoned and are put through a special process before being modeled. Beside the high grade line of saws made by Henry Disston and Sons, Incorporated, they produce a varied line of dependable tools. Literature describing the processes of manufacture of its tools, prices, and shipping details can be obtained by communicating with Henry Disston and Sons, Incorporated, Philadelphia, Pennsylvania.

NOW IS THE TIME TO LET HIM GO.

If you have a clerk who is more interested in closing the store and getting away than in closing a sale and getting the money, don't keep him waiting for closing time. Let him go now.

REMEMBER NEW CUSTOMERS' NAMES.

Learn to remember your customers' names. A little effort expended in this direction will bring results. Customers will be impressed by it. They will have more confidence in you. Get the habit of remembering names after hearing them for the first time. It is a small item but it produces a big balance.

MAKE SMALL SALES ADVERTISE.

Every sale should be an advertisement. Gain the good will of the trade and likewise their constant patronage. Because a sale is small, do not be in a hurry to dispose of the customer. It may mean the loss of larger future purchase.

**OPPORTUNITIES FOR FOREIGN TRADE
PRESENTED BY BUREAU OF FOREIGN
AND DOMESTIC COMMERCE.**

The Bureau of Foreign and Domestic Commerce through its Special Agents, Consular Officers and Commercial Attachés is receiving information of opportunities to sell hardware and kindred lines in several foreign countries. Names and locations will be supplied on request to the Bureau in Washington or its District Offices. Such requests should be made on separate sheets for each opportunity, stating the number as given herewith:

31353.—A commission agent from Egypt who has been in the United States for several years is about to return to his native country and desires to secure agencies for the sale of agricultural implements and general merchandise. References.

31354.—The representative in the United States of an importer in Italy desires to secure an exclusive agency for the sale in that country of copper in sheets, wire, etc. Reference.

31361.—A firm of manufacturers' agents in South Africa desires to represent manufacturers only for the sale of domestic hardware. Quotations should be given c. i. f. South African ports. Reference.

COMING CONVENTIONS.

Automobile Accessories Branch of the National Hardware Association. Hotel Sherman, Chicago, Illinois. December 8 and 9, 1919. A. H. Nichols, Chairman, Detroit, Michigan.

Oklahoma Hardware and Implement Association, Oklahoma City, Oklahoma, December 9, 10, and 11, 1919. W. B. Porch, Secretary, Oklahoma City, Oklahoma.

Pacific Northwest Hardware and Implement Association. Davenport Hotel, Spokane, Washington, January 20, 21, 22 and 23, 1920. E. E. Lucas, Secretary, Hutton Building, Spokane, Washington.

American Washing Machine Manufacturers' Association. Hotel Sherman, Chicago, Illinois, January 21 and 22, 1920. Raymond Marsh, Secretary, 10 South La Salle Street, Chicago, Illinois.

Indiana Retail Hardware Association, Athenaeum Hall, Indianapolis, Indiana, January 27, 28, 29, and 30, 1920. Exhibit in same hall. G. F. Sheely, Secretary, Argos, Indiana.

Oregon Retail Hardware and Implement Dealers' Association, Imperial Hotel, Portland, Oregon, January 27, 28, 29 and 30, 1920. E. E. Lucas, Secretary, Hutton Building, Spokane, Washington.

Kentucky Hardware and Implement Dealers' Association, the Armory, Louisville, Kentucky, January 28, 29, 30, and 31, 1920. Hardware, Implement, and Vehicle exhibit. J. M. Stone, Secretary, Sturgis, Kentucky.

Nebraska Retail Hardware Association, Lincoln, Nebraska, February 3, 4, 5, 6, 1920. Nathan Roberts, Secretary, Lincoln, Nebraska.

Wisconsin Retail Hardware Association, Milwaukee, Wisconsin, February 4, 5, and 6, 1920. P. J. Jacobs, Secretary, Stevens Point, Wisconsin.

Iowa Retail Hardware Association, Auditorium, Des Moines, Iowa, February 10, 11, 12 and 13, 1920. A. R. Sale, Secretary, Mason City, Iowa.

Michigan Retail Hardware Association. Hotel Pantlind, Grand Rapids, Michigan, February 10, 11, 12 and 13, 1920.

Exhibit in Furniture Exhibition Building. Arthur J. Scott, Secretary, Marine City, Michigan.

Pennsylvania and Atlantic Seaboard Hardware Association, Bellevue Stratford Hotel, Philadelphia, Pennsylvania, February 10, 11, 12, and 13, 1920. Exhibition in Philadelphia Commercial Museum. Sharon E. Jones, Secretary, 1314 Fulton Building, Pittsburgh, Pennsylvania.

North Dakota Retail Hardware Association, Grand Forks, North Dakota, February 11, 12 and 13, 1920. Hardware exhibit in Grand Forks Municipal Auditorium. C. N. Barnes, Secretary, Grand Forks, North Dakota.

Illinois Retail Hardware Association, Hotel Sherman, Chicago, Illinois, February 17, 18, and 19, 1920. Exhibit in connection. Leon D. Nish, Secretary, Elgin, Illinois.

Minnesota Retail Hardware Association, St. Paul Auditorium, St. Paul, Minnesota, February 17, 18, 19 and 20, 1920. H. O. Roberts, Secretary, 1030 Metropolitan Life Building, Minneapolis, Minnesota.

New York State Retail Hardware Association, Onondaga Hotel, Syracuse, New York, February 17, 18, 19 and 20, 1920. Exhibition in State Armory. John B. Foley, Secretary, 607 City Bank Building, New York City.

Missouri Retail Hardware Association, St. Joseph Auditorium, St. Joseph, Missouri, February 17, 18, and 19, 1920. F. X. Becherer, Secretary, 5136 North Broadway, St. Louis, Missouri.

New England Hardware Dealers' Association, Mechanics' Building, Boston, Massachusetts, February 23, 24, and 25, 1920. George A. Fiel, Secretary, 10 High Street, Boston, Massachusetts.

South Dakota Retail Hardware Association, Sioux Falls, South Dakota, February 24, 25, 26, and 27, 1920. Exhibit in connection. H. O. Roberts, Secretary, Metropolitan Life Building, Minneapolis, Minnesota.

Ohio Hardware Association, Hotel Gibson, Cincinnati, Ohio, February 24, 25, 26 and 27, 1920. James B. Carson, Secretary, Dayton, Ohio.

Michigan Sheet Metal Contractors' Association, Saginaw, Michigan, March 2, 3, and 4, 1920. F. E. Ederle, Secretary, Grand Rapids, Michigan.

National Warm Air Heating and Ventilating Association, Cleveland Hotel, Cleveland, Ohio, April 21, 1920. Allen Williams, secretary, Columbia Building, Columbus, Ohio.

Stove Founders' National Defense Association, Boston, Massachusetts, May 11, 1920. R. W. Sloan, Secretary, 826 Connell Building, Scranton, Pennsylvania.

Old Guard Southern Hardware Salesmen's Association, Marlborough-Blenheim Hotel, Atlantic City, New Jersey, May 12, 1920. R. P. Boyd, Secretary, Knoxville, Tennessee.

Southern Hardware Jobbers' Association, Marlborough-Blenheim Hotel, Atlantic City, New Jersey, May 11, 12, 13, and 14, 1920. John Donnan, Secretary, Richmond, Virginia.

American Hardware Manufacturers' Association, Marlborough-Blenheim Hotel, Atlantic City, New Jersey, May 11, 12, 13, and 14, 1920. F. D. Mitchell, Secretary, 4106 Woolworth Building, New York City.

National Association of Stove Manufacturers, Boston, Massachusetts, May 12 and 13, 1920. Robert S. Wood, Secretary, National State Bank Building, Troy, New York.

RETAIL HARDWARE DOINGS.**Arkansas.**

The Maddux Hardware Company at Blytheville has purchased the Hellipeter Shenyio Implement Department.

Kansas.

Paul Hauptman will close out his stock of hardware at Ludell.

R. M. Robertson of Belleville has purchased an interest in the hardware store of C. M. Chandler at Marysville.

L. D. Haynes has moved his implement business to Clifton.

Roy Bates has purchased a hardware store at Buckling. The Thompson Hardware Company has moved its stock into its building recently purchased at Abilene.

H. E. Leesack has purchased the furniture and hardware stock of J. M. Orr at Conway Springs.

Missouri.

Fritz Schierbaum will retire from the hardware business in which he has been engaged for 42 years. The junior members of his family will conduct the business.

Anderson Hardware and Lumber Company has been organized at Anderson with capital stock of \$25,000, by L. E. Higgs, of Anderson.

W. F. Gottenstroeter and Hy. Buckner have purchased the H. D. Hengstenberg hardware store at Owensville.

Oklahoma.

Charles Wade will open a new stock of hardware in the Willis Hardware Building at Stilwater.

Texas.

J. H. Wilson has purchased the hardware business of the Hillsboro Hardware Company at Hillsboro.

The Terhune-Orr Implement Company will open its business in the Masonic Building, North Main street, Vernon, soon.

AUTOMOBILE ACCESSORIES SOLD BY HARDWARE DEALERS

The Crenan Automotive Implement Company, Cape Girardeau, Missouri, has been organized with capital stock of \$30,000 by Russell L. Dearmont.

Plans are being drawn for a one-story, 150 x 110 foot factory for the Eco Manufacturing Company, Boston, Massachusetts, maker of piston rings.

The Valley Auto Specialty Company, Bay City, Michigan, has been incorporated with \$50,000 capital, by Allen McEwan and others to manufacture auto parts, etc.

The Auto Supply Manufacturing Company has been incorporated at Hartford, Connecticut, with \$100,000 capital, by E. E. Tryon, M. Rudick, H. G. Bowman, Jr., and John Weber.

The Auto Accessories Company, Detroit, Michigan, has been chartered with \$10,000 capital to manufacture motor trucks and accessories by Fred A. Carroll, 95 West Fort Street, and others.

The Taylor Manufacturing Company, Greenfield, Indiana, has been incorporated with \$150,000 capital to manufacture automobile accessories by Joseph C. Snell, Bert C. Lichty, and H. R. Taylor, Jr.

The American Manufacturing Company, Evansville, Indiana, has been incorporated with \$100,000 capital, by George Tugwell, Leonard Hartman, and Oscar Stahl. This company will manufacture spark plugs.

Articles of incorporation have been filed by the Duplex Storage Battery Company, Milwaukee, Wisconsin. The capital stock is \$60,000. A. J. Model and Thomas J. Mahon, attorney, appear as incorporators.

The Koss Brothers Manufacturing Company, Detroit, Michigan, has been incorporated with \$10,000 capital to manufacture machinery, motor valves, auto parts, etc., by Anton Koss, 997 Kirby Avenue, and others.

The Ionite Storage Battery Company, Worcester, Massachusetts, has been incorporated to make storage batteries by a new process with \$100,000 capital, by Albert H. Williams, John L. Judkins, Rayworth W. Burnham, and Howard W. Cowee.

A charter has been granted to the National Auto Top Company, Milwaukee, Wisconsin, incorporated with a capital stock of \$10,000, to manufacture automobile tops, cabs, etc. The organizers are Mrs. Rose Eder, Mrs. H. Goldmann, and Mrs. Harry Eder.

ADVISES AS TO CARE OF TIRES.

When selling tires to a new customer, it would be a good idea to hand him a leaflet, bearing the dealer's imprint, describing in a few words the damage which can be done to tires by gasoline, oil, and grease.

Where the motorist keeps his car in his own garage, he should be cautioned to be very careful that no pools of oil are allowed to stand on the garage floor where a tire may come in contact with them. To make the warning practical, tell him to immerse a small piece of rubber in gasoline. He will see it swell. After it has soaked for a time, he will find that there is no life left in it when he tries to stretch the rubber. Owing to the porous nature of rubber, any light lubricating oils have a destructive effect on tires. The oil is quickly absorbed and produces a chemical change which weakens the rubber. This effect is not immediately apparent, but it soon develops.

EXAMINE YOUR CUSTOMER'S CAR FOR ACCESSORIES HE MAY NEED.

The hardware merchant who would make the most of his stock of auto accessories can not stand idly by, expecting the business to come to him or hunt him up because of the merit or the completeness of his stock, or the fact that his prices for the same quality compare favorably with those of his competitors. An alert watch-out for new means of gaining business will bring to light many ways of pushing accessory sales.

For instance, the following suggestion is one of many that make for business along this line which would otherwise be lost. When a customer drives up to the store of a retail hardware dealer there is immediately offered to the merchant a field for more business. Be the eyes for your car-owning customers and show them where supplies are needed. Make a mental overhauling of his car. Show him the necessity of a spare tire to a driver who wants some sort of insurance in case of a blowout or other tire accident. How are the tail lights? Is the windshield all shot to pieces? How about a little polish to make the car look brighter? Wouldn't a robe or a blanket add comfort while driving?

There are many other questions concerning the equipment of your customer's car that could be utilized for increased business. The practice of the above suggestion would show to the satisfaction of the dealer wherein the creation of business in accessories can be made to a profitable extent.

DISPLAY YOUR ACCESSORIES.

Auto owners, as a general rule, are aware that dealers handle the ordinary run of accessories. But, it is in acquainting them with seasonal devices that wants can be actually created. And for this purpose there is no better medium than the window display. Seasonal displays are of the best kind. The weather adds to their effectiveness.

ADVERTISING CRITICISM AND COMMENT

Helpful Hints for the Advertisement Writer

A small advertisement may be made to do effective service, if properly designed and worded. An example of this sort is to be seen in the accompanying advertisement of Dame, Stoddard Company, reproduced from the *Boston Herald*, Boston, Massachusetts.

DAME, STODDARD CO. Everything in Good Cutlery Boy Scout Knives



\$2.00 Each

Patent stag handle with strong bolsters. Contains cutting blade, crown lifter, screw driver, can opener and reamer.

Cutlery Sharpened and Repaired

374 Washington St. Near Franklin

But it treats the subject in a thoroughly convincing manner. The illustration is clear. It gives a satisfactory idea of the boy scout knife. The verbal description supplements the picture and makes it easy to understand every detail. The prominence given to the statement of price enhances the pulling power of this advertisement. An impression of sincerity and accuracy—free from the weakening influence of superlatives—is produced by the words at the top, beneath the firm's name, to-wit: "Everything in good cutlery." The omission of the words Boston, Massachusetts, after the street address of the company ought to be remedied in future copy, because the *Boston Herald* has a considerable circulation outside of the city of Boston, and many prospective customers might be confused by the omission of the name of the city.

* * *

The very first thing the reader would see on the advertisement of the Rechlin Hardware Company,

RECHLIN'S Every Day Better Describes the 'Clear Policy' of This Store. RECHLIN'S

VALENTINE'S VALSPAR

Hot boiling water, ice cold water, anything has any effect on

VAL-SPAR

It is the "cure" for all rust, stains, discoloration, furniture, woodwork, etc.

WHY NOT TRY A FULL PINT CAN? Especially priced at...

90c

Perfection Oil Heaters

The "Perfection" is the only oil heater that has no odor and no smoke. It is absolutely guaranteed to give perfect satisfaction and keep the chill out of any ordinary room at but 1c per hour. See our special, only.

\$6.25

RECHLIN HARDWARE CO.
HARDWARE-FURNITURE-FARM IMPLEMENTS
817-819 Washington Ave. "The Name of Our Firm Guarantees the Quality of Our Goods" 1707-1709 Third St.

Bay City, Michigan, reproduced herewith from the *Bay City Times*, Bay City, Michigan, is the prices.

Even before a conception could be formed of what the prices were for, the boldness of them would strike the eye of the reader. Under the general assumption, when prices are so ostensibly marked, he would undoubtedly want to know what was for sale. The arrangement of the subject matter of this advertisement is well devised for that purpose. Using the trade-name and a meaningful illustration is a good combination. In the left-hand item, the regular price as a comparison would add to the strength of the special price. Some might not know the regular price. The description of the oil heater would be made more advantageous if the economical features were set up under the heading in larger type.

* * *

The line of demarcation between an advertisement and an announcement is thinner than the most delicate micrometer can measure. It is hard to determine

ATTENTION!

Automobile Owners

All Sizes Automobile Tires and Tubes. We Guarantee Service. How About Painting Your Car With Our Automobile Enamel, Any Color You Want. Will Make Your Old Car Look Like a New One and the Cost is Small.

PUMPS, BOOTS, PATCHES and other SUPPLIES. TRY US.

THE HOUSE OF SERVICE

Hereford-Morgan Hdw. Co.

TELEPHONE 162

PROMPT SERVICE

where the one begins and the other ends. That is why it is difficult to classify the copy reproduced herewith from the *Journal-Herald*, Waycross, Georgia. It is something more than a business card of the Hereford-Morgan Hardware Company, yet it is not printed in such a way as to bring out the specific appeal of the text, which is that of painting a car with automobile enamel. Instead of putting the relatively insignificant words, "Pumps, boots, patches and other supplies," in big black letters, the emphasis of the advertisement ought to be placed upon the words, "How about painting your car with our automobile enamel, any color you want. Will make your old car look like a new one and the cost is small."

HEATING AND VENTILATING

VISIT EXPERIMENTAL STATION OF UNIVERSITY OF ILLINOIS.

Great surprise and pleasure at the progress made by the engineers in charge of the Experimental Station of the University of Illinois were expressed by a group of the leading men of the warm air heater industry who visited the University of Illinois at Urbana, Illinois, November 24, 1919. Interest was centered upon the research work concerning warm air heaters which is being carried on under a cooperative agreement between the National Warm Air Heating and Ventilating Association and the engineers of the Experimental Station of the University of Illinois. This work involves the demonstration of the capacity of warm air heaters and a study of the proper installation and operation so that warm air heaters may be accurately rated and correctly selected to do the work required of them. A permanent staff of at least three men is constantly employed in these investigations.

The visiting group was composed of Wilbert E. Wise, President National Warm Air Heating and Ventilating Association; Allen Williams, Secretary of the Association, the members of the Association's Executive Committee, consisting of John D. Green, of the Detroit Stove Works, Detroit, Michigan; Frank T. Giblin, of Giblin and Company, Utica, New York; I. L. Jones, of International Heater Company, Utica, New York, and E. P. Miller, of the Lennox Furnace Company, Marshalltown, Iowa, and the members of the Association's Warm Air Heater Advisory Committee on Research, composed of J. M. McHenry, Chairman, Manager of the Warm Air Heater Department of Detroit Stove Works, Detroit, Michigan; P. J. Dougherty, heating engineer, International Heater Company, Utica, New York; R. C. Cook of the Thatcher Furnace Company, New York City; W. A. Tooher, Manager of the Warm Air Heater Department of the Wrought Iron Range Company, St. Louis, Missouri, and E. C. Moncrief, Vice-President of the Henry-Miller Foundry Company, Cleveland, Ohio. There were also present William Wynn, of the Scheible-Moncrief Company, Cleveland, Ohio; Charles G. Holmes, Manager of the Osborne Casting Company, Racine, Wisconsin, and Daniel Stern of AMERICAN ARTISAN, Chicago, Illinois. The work of the different branches of the Experimental Station was explained to the visitors by A. C. Willard, Professor of Heating and Ventilating; A. P. Kratz, Research Assistant Professor; B. S. Day, Research Assistant, and Ward E. Pratt, Research Associate of the University. A complete and profusely illustrated account of the warm air heater research work of the Experimental Station will be given in the "Warm Air Heater Special" of

AMERICAN ARTISAN to be issued December 6, 1919.

The visitors were entertained at luncheon at the University Club by C. R. Richards, Dean of the Staff, and Director of the Engineering Experiment Station, University of Illinois, Urbana, Illinois. There was a meeting of the Executive Committee of the National Warm Air Heating and Ventilating Association at the University of Illinois, Urbana, Illinois, and a good deal of work was accomplished at the session. Ample financial arrangements were made for the carrying on of the activities of the Association. It was decided that the next annual convention of the Association be held April 21, 1920, at the Cleveland Hotel, Cleveland, Ohio.

MIDLAND CLUB URGES DEALERS TO PREPARE FOR BIG BUSINESS.

That many warm air heater dealers have lost desirable profits this year through shortage of stock was clearly brought out at the meeting of the Midland Club, Tuesday, November 25, 1919, at Hotel Sherman, Chicago, Illinois. The warm air heater manufacturers who constitute the membership of the Midland Club report, without exception, a concentrated pressure of orders and increasing difficulty in supplying the goods at this season of the year. The meeting of the Midland Club gave earnest consideration to the problem of finding a way out of this perplexity. All the indications point to bigger business in the future. The dealer who puts off ordering warm air heaters until the busiest time of the trade discovers that he can not get sufficient goods to take care of his customers. Profits are made only when business is transacted. It is the part of wisdom to prepare for business in advance. It is, therefore, the advice of the Midland Club to the dealers that they place their orders far enough in advance to be assured of early deliveries. During the first quarter of the year there is a comparative lull in production, and this is the best time of the year for the dealer to make arrangement for his supplies. There has been no cessation of the upward trend of costs of labor and material. The warm air heater is no exception to the general average of advancing prices. Therefore, it is the consensus of the manufacturers before and after the meeting that warm air heaters are being sold at figures out of proportion to other standard commodities. Taking into consideration material, workmanship and service, it may be said that the warm air heater is being sold below its present actual market value.

John D. Green, of the Detroit Stove Works, Detroit, Michigan, is President of the Midland Club and Allen Williams of Columbus, Ohio, is Secretary. Both officers are experienced executives and have done much to build up the organization.

WARM AIR HEATING AND VENTILATING ASSOCIATION'S EXECUTIVE COMMITTEE MEETS.

During a visit to the Experimental Station of the University of Illinois, Urbana, Illinois, November 24, 1919, the members of the Executive Committee of the National Warm Air Heating and Ventilating Association profited by the occasion to hold a meeting for the transaction of business. Satisfactory measures were taken for the maintenance of adequate financial resources to carry on the various activities of the Association. The matter of fixing the date for the next annual meeting of the national organization was discussed and a decision arrived at to hold the next yearly convention of the National Warm Air Heating and Ventilating Association April 21, 1920, at the Cleveland Hotel, Cleveland, Ohio. The results already accomplished in research work on warm air heaters at the Experimental Station, University of Illinois, Urbana, Illinois, will constitute one of the most instructive and absorbing topics at the forthcoming convention.

IS TRUE TO MEANING OF ITS NAME.

In the accompanying illustration is shown a complete installment of Everlasting Cast Iron Smoke Pipe running from the warm air heater to the chimney and having a section containing a check draft. The sections are bolted together and strips of asbestos are placed between the joints when it is desired to make the entire installment proof



Everlasting Cast Iron Smoke Pipe, Made by the Waterloo Register Company, Waterloo, Iowa.

against leakage or smoke gas. The sections are interchangeable, to fit each other, and will nest for shipping. This pipe, which is made by the Waterloo Register Company of Waterloo, Iowa, comes in two-foot, one-foot and six-inch length to enable fitting to any distance. The fitted ends and bolted joints are said to make it self-supporting in ordinary conditions. The elbows are furnished in 45 degree and 90 degree angles, in eight-inch, nine-inch and ten-inch sizes. By writing to the Waterloo Register Company, Waterloo, Iowa, dealers can secure the Company's new catalogue listing the smoke pipe, registers, and fittings and a full and complete line of heating plant accessories.

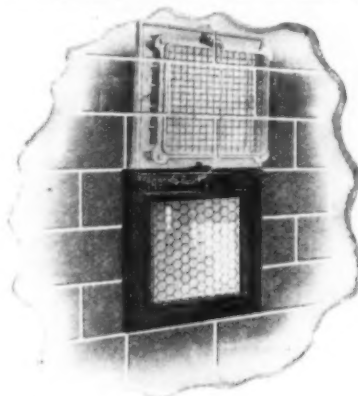
INCREASE IN BUSINESS REQUIRES MANUFACTURERS TO MOVE TO LARGER PLANT.

Due to increased business, the Hero Furnace Company will move from its location at De Kalb, Illinois, to more spacious quarters at Chicago Heights, Illinois. While the demands for its products were ever growing the manufacturing capacity did not increase and soon fell behind the requirements upon it. The re-

moval of the plant will take place about the first of the year. The new factory at Chicago Heights will be a two-story building with approximately three times more space than the former plant. More adequate facilities of transportation are available in its new place. With the augmenting of its productive capacity, the Hero Furnace Company declares it will be better able to meet the requirements of dealers and installers. J. V. Patton, president of the company, announces that as in the past, no effort will be left untried to satisfy the needs of its customers. Constant improvement will continue to be the guiding principle in its new quarters.

HAS GLASS OR CAST IRON DOOR.

The "Best" Fuel Chute shown herewith which the Sterling Foundry Company of Sterling, Illinois, manufactures, consists of a cast iron frame, a door with



"Best" Fuel Chute, Made by the Sterling Foundry Company, Sterling, Illinois.

a glass front and a steel tube. The frame sets flush with the wall and is provided with a flange which overlaps the door, thus preventing the rain from running into the chute. The door is cast iron with a heavy reinforced wire glass in it. This glass is held in position by a collar on the back of the door.

To protect the glass from any falling coal, a heavy screen is placed between the collar and a light cast iron frame is bolted to it. During the summer, the glass can be removed and a screen inserted, thus making the chute serve the purpose of a ventilator. The prime purpose of the "Best" Fuel Chute is for use in foundations for placing coal and other fuels into the basement but it can be used advantageously in buildings and sheds where fuel, sand, rock and other materials are stored. The Company also makes a chute with a solid cast iron door, the chutes coming in two styles and three sizes both with and without the steel tubes. For further particulars, those interested should address the Sterling Foundry Company, Sterling, Illinois, and secure copies of its catalog and literature.

TRADE-MARK IS REGISTERED.

The P. C. De Vol Hardware Company, Council Bluffs, Iowa, has secured registration at the United States Patent office for the trade-mark shown herewith. The particular description of goods is warm air heater, coal-heated.

DE VOL'S
117.154.

The Peerless Foundry Company, Cincinnati, Ohio, plans to increase its warehouse facilities. It has awarded a contract for a building, one-story, 40 x 50 feet.

PRACTICAL HELPS FOR THE TINSMITH

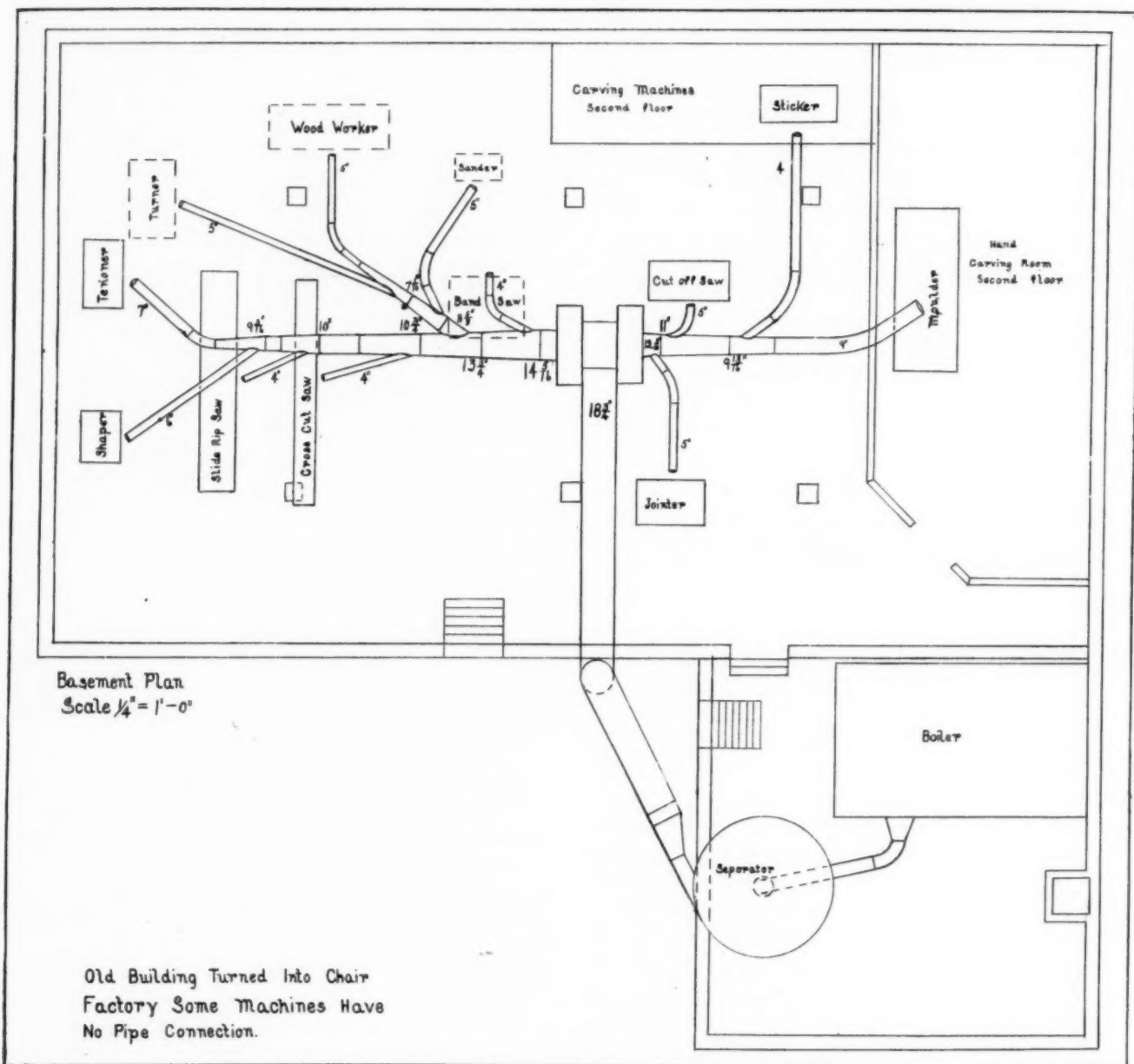
CHAIR DUST COLLECTING SYSTEM.

By O. W. KOTHE.

The blow pipe man has a great variety of factories to pipe. In this case, an old building has been turned into a chair factory, and, of course, the many dust and

as the diversion of flow will cut off the main flow somewhat. It, therefore, produces too much friction.

One important point to observe is never to run the pipes along on the floor if any other arrangement can be made, the reason being that the floor is the place for lumber and other finished products. Trucks with



Chair Dust Collecting System.

shaving producing machines must be piped up to remove as much of the foreign matter from the workmen's way and the air as possible.

In designing such piping systems, always avoid as many angles in both the main sustain line and branch pipes as possible. All branches should enter the trunk line on an angle of not less than 45 degrees. This is to cause the materials to merge without cutting one another off. It is not good practice to run two branch pipes into the trunk line directly opposite one another,

loads of work are carted about and every piece that would fall on the pipe would bruise it. The pipes must also be kept straight, especially in the joints, so no pockets are formed. All inside edges must also lay up close to prevent slivers lodging and banking up the pipe. This often happens when rivet heads stand up on the inside of the pipe. Hence all rivets must be drawn down tightly.

Detachable joints should be placed between hood and lower elbow of every branch pipe to enable re-

moval. This is often necessary owing to the pipe stopping up or in making repairs to the machine. The pipe for these loose slip joints must be well braced with wires and turn buckles. In this case we have a double fan, which discharges the material direct to the furnace feeder and boiler. All fittings should be closely studied and laid out for practice.

CHICAGO SHEET METAL CONTRACTORS WILL HOLD MEETING.

An uncommonly interesting meeting of the Chicago Sheet Metal Contractors' Association will be held in the rooms of that organization, Chamber of Commerce Building, Chicago, Illinois, Tuesday evening, December 2, 1919. The relation of the local organizations to the national body will be discussed and measures for closer cooperation will be outlined by Arthur P. Lamneck, President, National Association Sheet Metal Contractors of the United States, Columbus, Ohio. Better business methods, more efficient analysis of overhead expenses, improvements in shop practice, unification of policy in the treatment of the labor problems and many other topics bearing upon the trade have a national as well as a local aspect. The industry prospers as a whole when the general average of its component units is raised to higher levels by coordinated study and effort. The benefits to be derived from regular meetings for the exchange of ideas and experience are positive and lasting. David M. Haines, President of the Chicago Sheet Metal Contractors, earnestly requests members of the organization to attend the forthcoming meeting not only out of loyalty to the Association, but as a tribute of respect and honor to the national President who is to address the gathering.

ALTERS COMPANY'S TITLE TO MAKE IT CONFORM WITH FACTS.

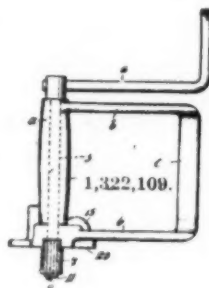
In view of the fact that the business of the Joseph E. Brown Company, Philadelphia, Pennsylvania, has been wholly under the control of Benjamin F. John since 1913, it has been decided to change the title of the company to that of Benjamin F. John Company. This is a matter of justice and wisdom. The name of Benjamin F. John is associated in the sheet metal trade of Pennsylvania with lofty standards of service and reliability. Mr. John is extremely active in organization work in the trade, and finds time to edit the Monthly Bulletin of the Roofing Metal and Heating Engineers of Philadelphia, Incorporated, Philadelphia, Pennsylvania. His many friends and customers are pleased with the change in the name of the firm because it presents the business to the trade in the light of his personality.

ASSIGNS METAL WORKING PATENTS.

Under numbers 1,322,109 and 1,322,110 United States patent rights have been granted to Paul R. Hahneemann, Southington, Connecticut, assignor to The Peck, Stow and Wilcox Company, Southington, Connecticut, a Corporation of Connecticut, for a metal-working tool, and a gage for metal-working

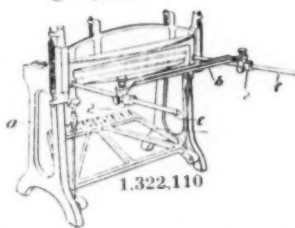
machines, descriptions of which are set forth in the following paragraphs:

1,322,109:



In a tool of the character described, a hand grip, a brace connected therewith and adapted for engagement with the extremity of the operator holding the tool, a rotary shaft supported by said hand grip, means for rotating said shaft, cooperating metal fabricating members, one of which is mounted upon an axis parallel with the axis of said shaft and a driving connection between said shaft and members.

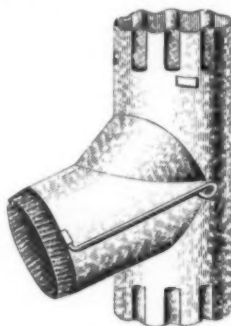
1,322,110:



The combination with a gage plate and the supports therefor, of a pair of brackets carrying said plate and slidably mounted on said supports, a rotatable pin mounted on each bracket transversely of said supports, means for rotating said pin, and resilient means for holding said pin in engagement with said supports.

WITHSTANDS RAIN AND STRAIN.

Though of simple construction, the Centennial Rain Water Cut-Off, made by the Sullivan-Geiger Company, Indianapolis, Indiana, illustrated herewith, is designed to withstand wear for an uncommonly long time. Material and workmanship used in the making of these products are of the best. Unlike the ordinary cut-off this one is adjustable. It is the only cut-off made to fit corrugated and plain pipe and can be used without extra pipe or elbows, declare the manufacturers. Sheet metal contractors can readily see the advantage to be gained in the use of these cut-offs. Besides its corrosion-resisting qualities it is built to endure under severe strain. Sheet metal contractors and others interested who desire complete details on these Cut-Offs will receive information from the Sullivan-Geiger Company, 501 to 509 Madison Avenue, Indianapolis, Indiana, upon inquiry.



Rain Water Cut-off,
Made by the Sullivan-
Geiger Company,
Indianapolis, Indiana.

of these cut-offs. Besides its corrosion-resisting qualities it is built to endure under severe strain. Sheet metal contractors and others interested who desire complete details on these Cut-Offs will receive information from the Sullivan-Geiger Company, 501 to 509 Madison Avenue, Indianapolis, Indiana, upon inquiry.

SEEKS INFORMATION ON BUSINESS.

How much time do you spend to make yourself a better business man? Do you depend on luck to bring you success or do you take the positive road—the road of study and alertness? Instead of spending time worrying over business losses you should utilize that time in finding out all possible about your line and its market.

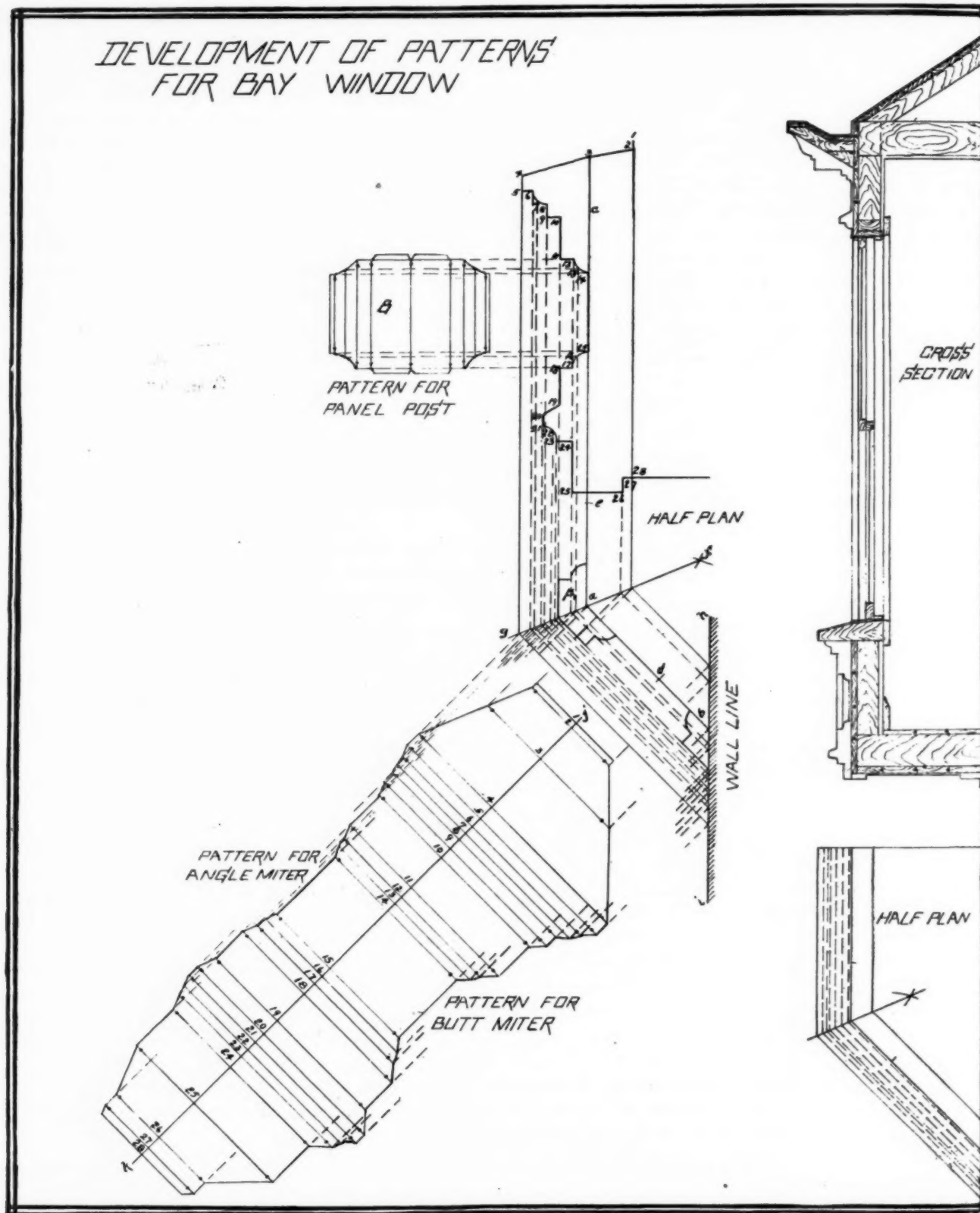
To paraphrase Tom Witten's famous saying, get acquainted with "the other fellow"—you might like him.

DEVELOPMENT OF PATTERN FOR BAY WINDOW.

By G. L. GRAY.

First draw the profile of the desired moulding. In order to develop the pattern it is necessary to show it

one another as at f. The line f-g is then drawn through the points f-a giving the miter line. Now space the profile to any convenient number of spaces, and from these points draw lines intersecting the miter line f-g. From the points thus obtained on miter line, draw lines parallel to line a-b and intersecting the wall



Development of Pattern for Bay Window.

as it would appear in plan. The line a-c is then drawn representing the face of the bay. Then at proper angle, in this case at an angle of 45 degrees to line a-c, draw line a-b. The wall line is then drawn parallel to line a-c as line i-h. The angle b-a-c is then bisected by striking the arcs e-d with a as center; then with d and e as centers, strike the arcs intersecting

line i-h which is the angle of the butt miter. In developing the pattern draw a line at right angles to line a-b in oblique section of plan as line j-k and place stretchout on same, and through these various points draw the usual parallel lines indefinitely. Then from points on miter lines and parallel to line j-k, draw lines intersecting lines of corresponding number in

pattern. Tracing a line through points thus obtained gives the desired pattern.

To develop plans for panel posts: Take the spacings as shown at A in plan, and place on a line drawn at right angles to panel face as shown at B; also draw the parallel lines through these points. Then from points in panel face and at right angles to same draw the lines intersecting corresponding lines in pattern. Tracing a line through these points completes the pattern.

PATTERN FOR SPIRAL CHUTE.

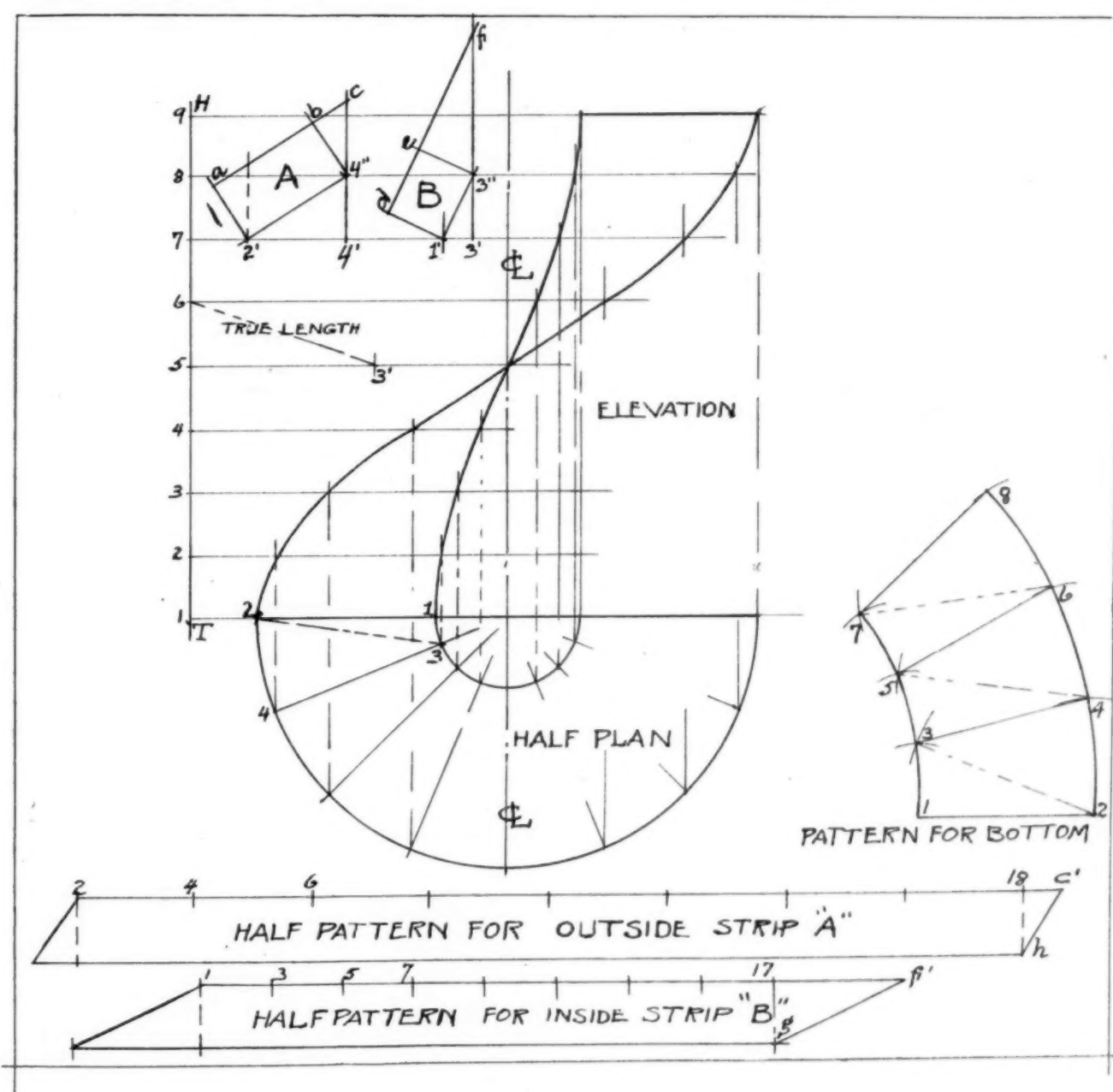
By O. W. KOTHE.

Replying to the sketch submitted by Mr. White of Chicago for a pattern development of a spiral chute

draw lines to the center, which also divided the inner semicircle in the same number of equal parts.

Next draw the pitch line H-T to make, say a one-half revolution. By making it equal to the diameter of large semicircle, it produces the spiral on a 45 degree. However, any degree can be worked out as desired. Divide this pitch H-T in the same number of equal parts as found in the half plan, and draw horizontal lines from each of these points. Then from each point in each of the semicircles erect lines to cross horizontal lines of similar number. This permits tracing the spiral lines as shown.

In practice, this elevation spiral is not necessary, as only the rise between spaces of pitch line H-T are required. Now observe that for each space in plan, the elevation raises one point. This requires a longer



Pattern for Spiral Chute.

as sketched by him in AMERICAN ARTISAN AND HARDWARE RECORD a few issues back, the annexed drawing shows how this is done.

First draw the half plan, making the diameters of semicircles to suit your work. These will be the edge views of the side pieces. Divide the outer semicircle in any number of equal spaces, and from these points

girth to produce the spiral and so we develop the diagrams A and B.

Since all the divisions in line H-T are equal, we shall use any one, say 7-8 in this case. So pick the space 2-4 from plan and set as 2'-4', and erect line as 4'-4''; then line 2'-4'' will be the true length between spaces of plan to produce the correct girth. In the

same way pick space 1-3 from plan, and set as 1'-3". Erect line 3'-" and draw slant line 1'-3", and we have the true length for the girth of throat pieces.

By squaring out lines as 2'-a; 4"-b of diagram A and 1'-d; 3"-e equal to the width of side pieces, and by projecting lines, we establish the miters as 4"-b-c and 3"-e-f. These will be the miters for the ends of side pieces for throat and heel.

Now observe the solid radial lines of plan are true lengths because they must be held horizontal and maintain the bottom to this width. But the dotted line 2-3 must be lengthened to take in the rise of one space in the pitch. This gives true length 6'-3".

After this, the pattern for the bottom is triangled, using the slant lines in A and B as girth. This bottom must be made in short pieces, say two to three or four feet long as there is a twist produced that must be worked out by the hammer. So these bottom plates are made in length as a person can work them conveniently.

The throat and heel strips are made to take on the slant line lengths in diagram A and B, since these strips must fit to the edge of bottom pattern. The miter ends can be made as at pattern "A" and "B." These can be cut out of 8 foot lengths and filled in as they come.

MAKES SLIGHT CHANGE IN NAME OF LONG ESTABLISHED BUSINESS.

Effective January 1, 1920, the firm name of Otto Bernz, Newark, New Jersey, will be changed to Otto Bernz Company. This change is to be made merely as a matter of form. It will in no way affect the personnel of the firm. Inquiries and orders will receive the same prompt and careful attention as heretofore under the same conditions and terms. The quality of the gasoline and kerosene tinsmith's furnaces and torches made by the Otto Bernz Company will be maintained at the high level of excellence which has always characterized the Otto Bernz products.

PREVENT RUST AND AVOID LOSS.

Large users of steel sheeting or beams will find much of interest in the report of Dr. Samuel L. Hoyt, formerly associate professor of metallography at the University of Minnesota and now connected with the General Electric Company at Cleveland. Dr. Hoyt conducted a series of exposure tests covering a period of three years and has recently completed his experiments and compiled the data. The materials tested included the so-called copper bearing steel and the ordinary bessemer steel.

Different specimens of each type of iron and steel were cleaned at periodic intervals. In this way all rust was cleaned off at certain times during the three years' exposure test and the material itself again exposed to the atmospheric elements. These exposure tests were made on the roof of a building where they were continuously exposed to rain, snow and sunshine.

Dr. Hoyt proved by his experiment that some of his samples failed completely before the end of the

three years, thus showing the quick and destructive action of rust. All of the specimens of iron and steel were affected to a more or less extent depending on the number of times they were cleaned of rust during the period of testing.

One truth which may be derived from the study of the report is that all steel and iron rusts much more quickly than the average person suspects and that soon the efficiency of the sheet or beam is lessened to a considerable extent. It is indeed fortunate that modern users of steel have an efficient means of combating this rust in the form of rust inhibitive paint. Special iron antioxide paint contains pigments and bases which not only improve the appearance of the metal but also form a protective film that completely preserves the metal beneath it and prevents any deterioration due to rust. The original cost of the paint which is necessary to cover the metal is saved many times in the increased life of the material.

TOO MUCH TALK IS WASTEFUL.

Glibness of tongue is not salesmanship. You must be able to substantiate your claims. To say too much is wasteful; to say too little is neglectful. Let the qualities of the goods conform to your statements concerning them. Just bring forth vividly the inherent quality of the goods.

NOTES AND QUERIES.

Outfits for Repairing Automobile Radiators.

From T. I. Thersen, 144 South Eastern Avenue, Idaho Falls, Idaho.

Kindly inform me where I can purchase a first class outfit for repairing and rebuilding automobile radiators.

Ans.: F. L. Curfman Manufacturing Company, Maryville, Missouri.

Ingot Iron Eaves Trough.

From John R. Jones, Ames, Iowa.

Where can we secure Ingot Iron Eaves Troughs?

Ans.: Milwaukee Corrugating Company, Milwaukee, Wisconsin; David Lupton Sons, East Allegheny Avenue and Tulip, Philadelphia, Pennsylvania; Merchant and Evans Company, 347 North Sheldon Street, Chicago, Illinois; Friedley Voshardt Company, 733 South Halsted Street, Chicago, Illinois; and Clark Smith Hardware Co., Peoria, Illinois.

Favorite Warm Air Heater.

From Hammen Brothers, 723 First Avenue, Corner Spencer, Peoria, Illinois.

Can you inform us where the Favorite Warm Air heated is made?

Ans.—Favorite Stove and Range Company, Riqua, Ohio, and Williamson Heating Company, Cincinnati, Ohio, both make Favorite warm air heaters.

Bread Boards With Silver Plated Rims.

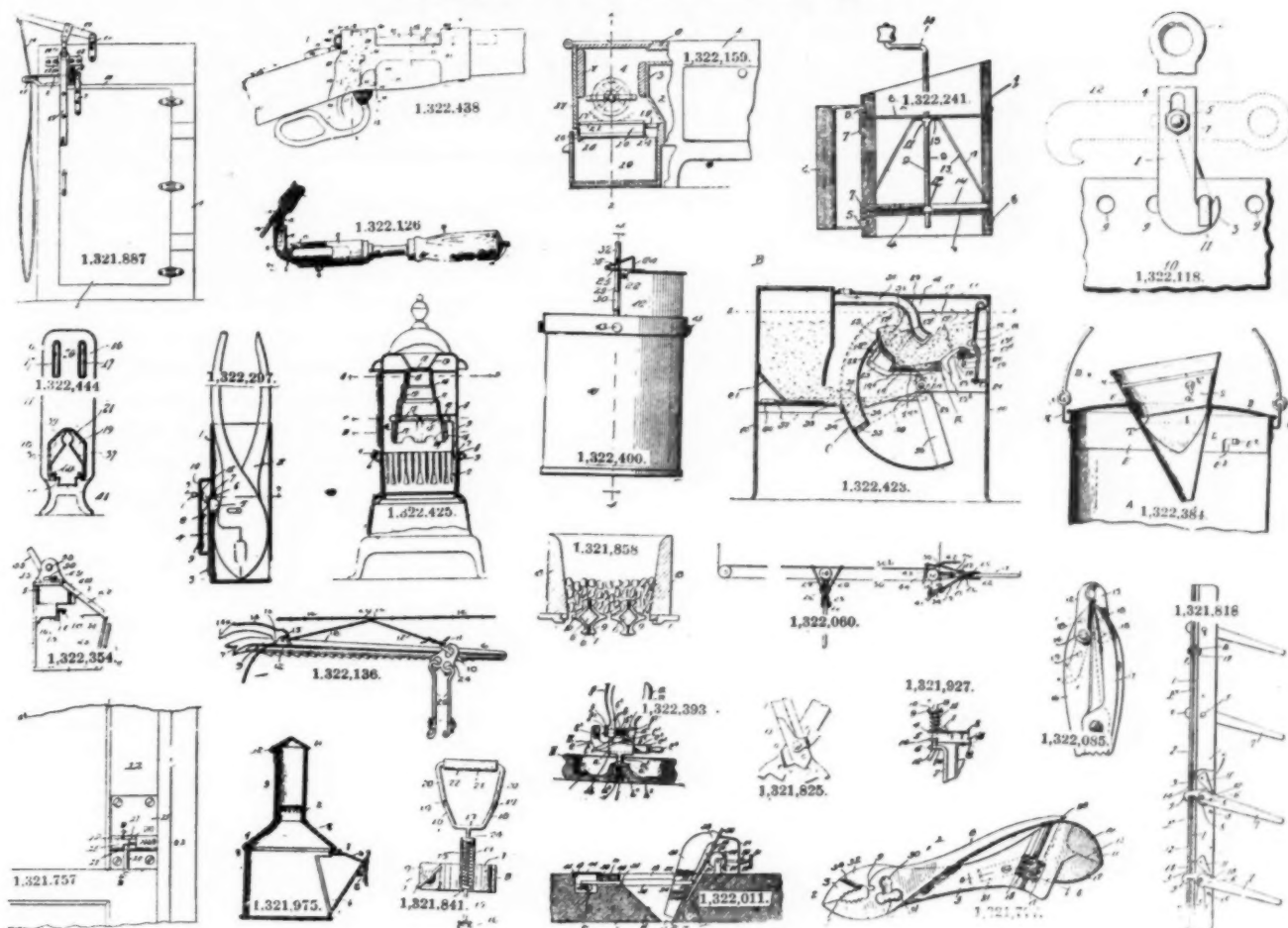
From Keleher and Breit(Lodi, Wisconsin.

We would like to know where we can buy wooden bread boards with silver plated rims.

Ans.—Frank B. Tinker, 29 East Madison Street, Chicago, Illinois.

The Standard Sheet Metal Works, Milwaukee, Wisconsin, has been incorporated with \$10,000 capital, by John G. Mattes, Jacob Schahner, and Henry Bloodow.

NEW PATENTS.



1,321,151. Window-Lock. George F. Kinzel, West Orange, N. J. Filed May 21, 1919.

1,321,777. Compound Tool. Stephen Stepanian, Columbus, Ohio. Filed Feb. 24, 1919.

1,321,818. Wire-Fence Clamp. Samuel Gibson, Woodrow, N. C. Filed July 27, 1918.

1,321,825. Attachment for Shears. William Glock Heimendinger, Louisville, Ky. Filed Feb. 21, 1919.

1,321,841. Controller for Reels for Fishing-Lines. Maximilian J. Otto, New York, N. Y. Filed Sept. 4, 1917.

1,321,858. Stove-Grate. Clarence D. Starr, Providence, R. I., assignor to Barstow Stove Company, Providence, R. I., a Corporation of Rhode Island. Filed June 7, 1919.

1,321,887. Door-Operating Mechanism. John A. Chambers, Newburg, Mo., assignor of one-fourth to John A. Potter, and one-fourth to Henry F. Warneke, Sr., St. Louis, Mo., and one-fourth to Henry F. Warneke, Jr., Maplewood, Mo. Filed Mar. 6, 1919.

1,321,927. Catch. James Quincy Leavitt, Ogden, Utah. Original application filed May 23, 1918, Serial No. 236,212. Divided and this application filed Feb. 26, 1919.

1,321,975. Heater. Williard H. Briscoe, Mission, Tex.; assignor of one-half to John H. Shary, Mission, Tex. Filed Feb. 21, 1919.

1,322,011. Plane. Elmer H. Gutknecht, Milwaukee, Wis. Filed June 27, 1918.

1,322,060. Wire-Fence Stretcher and Tightener. Emil Sahler and John W. Holt, Minneapolis, Minn. Filed Mar. 31, 1919.

1,322,085. Flower Shears and Stripper. Frederic J. Bertrand, San Francisco, Calif. Filed Aug. 27, 1917.

1,322,118. Safety-Hook. Rex Kentling, Mohler, Oreg. Filed April 14, 1919.

1,322,126. Electric Soldering-Iron. George T. Lucas, San Francisco, Calif. Filed Dec. 30, 1918.

1,322,136. Wire-Splicing Device. Emil Sahler, Minneapolis, Minn., assignor of one-half to John W. Holt, Minneapolis, Minn. Filed Mar. 21, 1919.

1,322,159. Combination - Stove. Marcus Berkowitz, Spring Valley, N. Y. Filed April 30, 1918.

1,322,241. Sifter. William D. Hughes, Condon, Oreg. Filed Feb. 21, 1918.

1,322,297. Holder for Pliers. Harry C. Ferton, Moorefield, Neb. Filed May 14, 1919.

1,322,328. Hammock-Hook. Richard S. Morgan, Edwardsville, Pa. Filed Oct. 14, 1918.

1,322,354. Tool-Box. Nicholas Scholes, Mobile, Ala. Filed Sept. 13, 1918.

1,322,384. Strainer Milk-Pail. Frank Wilard, Utica, Mo. Filed May 2, 1919.

1,322,393. Nutcracker. William H. Pagly, Los Angeles, Calif. Filed May 29, 1919.

1,322,400. Garbage-Can Cover. Carl Bernson, Brockton, Mass. Filed April 10, 1919.

1,322,423. Stove and Other Heater. George Furuholmen, Minneapolis, Minn. Filed July 6, 1915.

1,322,425. Stove and Furnace. George G. Garey, Indianapolis, Ind. Filed April 12, 1916.

1,322,438. Rifle. George Livingston Henderson, Yellowstone Park, Wyo. Filed Nov. 16, 1918.

1,322,444. Gas-Radiator. Benjamin F. Hulse, Los Angeles, Calif., assignor to Thomas J. Potter, Los Angeles, Calif. Filed Mar. 27, 1917.

OPENS WAY TO POSSIBILITIES.

"It never rains, but pours." So with business. When you can substantially increase business your possibilities in that direction are commensurate with the degree of your effort. Once you have effected a steady increase by earnest effort the gap will widen like a hole in a dike. There is no royal road, however. Constant application of energy to the study of your business and its kindred channels is absolutely necessary.

WEEKLY REPORT OF TRADE AND THE MARKETS

WORKERS ARE RETURNING TO STEEL MILLS AT INCREASING RATE.

Reports from every quarter of the steel industry indicate that the strikers are returning to work in large numbers. The opinion is general that the end of the strike is not far off, but the operating rate is not increasing proportionately, for these men are not producing on the same scale as in former years. The demand for all descriptions of steel products is growing heavier every day and there still is a big shortage in supplies of billets and sheet bars, with prices firmly maintained. In fact, substantial premiums are being offered for delivery, without resulting in much business.

The market for finished materials also continues strong and makers of structural steel and other fabricated products are booking heavy tonnage. The inquiry for plates continues heavy and there are few mills not covered fully for the remainder of the current year.

It was reported that Japan had ordered 10,000 tons of plate and that the order had been accepted by a manufacturer in Youngstown, Ohio, who is handling the business on a basis of 2.65 cents, basis mill. So far there has been no advance in the price of sheets, but a move is expected soon as the market is very firm with supplies considerably less than the demand calls for.

There have been few developments in the railroad buying situation, as the adjournment of Congress, without having settled the railroad mix-up, left the mills in an unsatisfactory position as far as quoting prices is concerned. The mills are not inclined to quote rail prices on a large scale until it is known what railroad freight rates are to be during next year. These rates will make a big difference in the cost of producing rails, as well as all other steel products. On the other hand, the roads are inquiring for all descriptions of steel products and equipments as well as rails, for the Railroad Administration bought sufficient steel supplies to cover only immediate requirements, and the roads are bare of surplus supplies.

The coal strike is having a strong sentimental influence on the steel industry and in a few instances some of the smaller producers are beginning to feel the pinch of lack of supplies. So far as the big producers in Pittsburgh, as well as around Chicago, are concerned, the effect still is only sentimental, for the leading producers are fairly well covered in coal up to the end of this year, and it is believed the strike will be out of the way by then.

STEEL.

The demand for plates, shapes and bars has shown no abatement, and prices are being maintained firmly. Chicago reports that the release of some supplies of

coal which had been held in transit in that district has relieved the situation somewhat and has enabled some of the smaller mills to resume operations.

United States Railroad Administration will place no additional orders for rails at this time as the roads will probably be turned back to their owners before shipments on contracts made at this time could be made. The last order placed was for 40,000 tons. Railroad purchases of steel, both directly and indirectly will probably be very heavy in 1920, that is as soon as mills are in position to accept substantial contracts for building of cars and motive power.

Structural steel work continues active. Bids went in a few days ago on 17,000 tons structural steel for the Chicago Union Station. The Standard Oil Company requires 3,000 tons shapes for the erection of 500 oil storage tanks. Another oil company is in the market for ten oil tanks which will require 1,500 tons steel plates.

COPPER.

The failure of the Senate to ratify the peace treaty greatly upset the copper market toward the end of the week. Producers had been looking forward to the establishment of peace with the Central European powers patiently for a long time, and are greatly disappointed in that this desideratum still seems as far off as ever.

Ratification would have meant establishment of credits, stabilization of foreign exchange and the long deferred buying of copper by the Central Powers, which are badly in need of the metal. Domestic demand, as great as it might develop, can never take care of all the copper which is produced in the United States. Producers always have been counting on European demand, figuring it up to about 50 per cent of production. Under these circumstances it might be necessary further to curtail production, for otherwise producers must carry the present surplus of stocks for an indefinite time. The market remains unsettled and domestic consumers, expecting a lower tendency, buy only in a routine way.

A further decrease of the price of copper sheet has occurred in the Chicago market, the quotation now being 30 cents per pound.

TIN.

The market for tin displayed great irregularity last week and swayed back and forth, influenced by London cables partly and also by more favorable conditions prevailing on this side in the distribution of tin stored at the docks during the recent strike. The speculative market in London recovered toward the end of the week the losses recorded at the beginning of the week, and in consequence dealers here marked up spot delivery in Straits tin to 53 $\frac{7}{8}$ cents and future shipments were held at the same price. Tin plate

makers are busy and it is expected that their buying soon will come to the market.

LEAD.

The market, while it can not be called active, is fairly firm, as there is less pressure to sell East St. Louis lots which were freely offered last week. There seems to have been also a considerable clearing up of outside parcels in the Middle West.

SOLDER.

The quotations ruling the Chicago market for solder are as follows: Warranted, 50-50, per pound, 34.75 cents; Commercial, 45-55, per pound, 31.75 cents; Plumbers' per pound, 28.65 cents.

ZINC.

The zinc situation can hardly be called good, for the sum total of the buying which the recent tempting decline brought out was not large, though pretty well distributed among the larger sheet mills, all of whom seem to have fairly ample stocks.

The London market advanced 10 shillings per ton, and there was also an advance in the rate of Sterling exchange which gave a firmer tone to our domestic zinc market.

There are some small orders being offered for English account, but it can hardly be said that the buyers show any great eagerness or evidence any interest in large tonnages. The best bid they have made up to present writing is 7.80 cents East St. Louis for January-March, for shipment from West of the Mississippi.

TIN PLATE.

The tin plate mills are as badly congested as the sheet mills, having capacity for the first three months of next year fully sold, including the carry over orders from 1919, but for second quarter shipment orders are being booked for about 10 to 25 per cent of customer's requirements. Canadian consumers are being placed on practically the same footing as domestic consumers, because it is absolutely necessary to take care of the packing of fruit, salmon and other food products. Certain other preferred consumers of tin plate will also be able to place small tonnages for shipment beginning next April.

The leading interest called a conference of its sales agents about two weeks ago. The result of this meeting is now being seen in the pro rating of orders for black and galvanized sheets to regular customers. The same method applies to export trade, but the largest interests have their capacity for the first quarter of next year sold solidly, and it is only on second quarter shipments that they are considering taking orders for even small percentages of regular requirements of customers. For England and European Continental shipment practically no orders will be accepted, but a moderate tonnage will be available for shipment during the second quarter to the Orient, South America, Australia and Canada.

In the Chicago market, first quality bright tin plates, IC, 14x20, are quoted at \$13.20 per box of 112 sheets and other gages and sizes at corresponding figures.

SHEETS.

Information from Youngstown, Ohio, is to the effect that shortage of sheets in the Mahoning valley virtually has reached famine proportions. Independent makers are sold up well into the first quarter, and, in one case, until about the middle of March. Probably never in the history of the valley have so many consumers visited the mills in an effort to obtain tonnages. Manufacturers give no assurances when they will offer their product freely. Mill schedules have been set back six weeks by the strike and makers can not see their way clear to satisfy any new demands.

An unprecedented demand exists for light-gage galvanized both for domestic and foreign consumers. Consumers of this grade are willing to pay most any premium for spot material, and offers from \$15 to \$20 above present quotations have been reported.

OLD METALS.

Wholesale quotations in the Chicago district which may be considered nominal are as follows: Old steel axles, \$30.00 to \$31.00; old iron axles, \$32.50 to \$33.50; steel springs, \$21.50 to \$22.50; No. 1 wrought iron, \$22.50 to \$23.50; No. 1 cast, \$28.00 to \$29.00, all net tons. Prices for non-ferrous metals are as follows, per pound: Light copper, 13 cents; light brass, 7½ cents; lead, 5 cents; zinc, 5 cents; cast aluminum, 24½ cents.

PIG IRON.

Demand for pig iron shows no abatement and iron for spot delivery is scarce in all districts. Brokers with small lots to dispose of are getting almost any price they care to ask. Pig iron prices in the South again have advanced \$1 per ton and are on a basis of \$31 for No. 2 foundry. Inquiries are numerous, but producers still are cautious and reluctance to sell is caused by expectations of wage readjustments which may affect costs. In the Buffalo district many melters are hastening to be covered, but are encountering difficulty in getting iron for prompt shipment, only limited tonnages being available.

According to the weekly report of Rogers, Brown and Company, when the facts behind the present pig iron situation are known, it does not take a prophet nor a son of a prophet to realize why there is so much interest being shown at this time by consumers in their requirements for the first half of 1920. The great difficulty is to find furnaces in position to take care of them. For five consecutive months, sales and shipments of merchant pig iron have exceeded production. Stocks on the furnace yards are rapidly being depleted, even the off sulphur grades being disposed of.

The demand for iron is extremely urgent and many inquiries remain uncovered. Due to the curtailment in production since September, most furnacemen will have to supply the iron made during the first half of next year on contracts which, naturally, would have been fulfilled before January 1st. This means that they will not be able to take on anything like their customary first half business.

